

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☐**APPLICATION FOR PERMIT TO DRILL**


2. TYPE OF WORK DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>				1. WELL NAME and NUMBER NBU 920-12E		
4. TYPE OF WELL Gas Well Coalbed Methane Well: NO				3. FIELD OR WILDCAT NATURAL BUTTES		
6. NAME OF OPERATOR KERR-MCGEE OIL & GAS ONSHORE, L.P.				5. UNIT or COMMUNITIZATION AGREEMENT NAME NATURAL BUTTES		
8. ADDRESS OF OPERATOR P.O. Box 173779, Denver, CO, 80217				7. OPERATOR PHONE 720 929-6587		
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE) UTU-0144868B		11. MINERAL OWNERSHIP FEDERAL <input checked="" type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>		9. OPERATOR E-MAIL mary.mondragon@anadarko.com		
13. NAME OF SURFACE OWNER (if box 12 = 'fee')				12. SURFACE OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input checked="" type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>		
15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')				14. SURFACE OWNER PHONE (if box 12 = 'fee')		
17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN') Ute				16. SURFACE OWNER E-MAIL (if box 12 = 'fee')		
18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS YES <input type="checkbox"/> (Submit Commingling Application) NO <input checked="" type="checkbox"/>		19. SLANT VERTICAL <input checked="" type="checkbox"/> DIRECTIONAL <input type="checkbox"/> HORIZONTAL <input type="checkbox"/>				

20. LOCATION OF WELL	FOOTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN
LOCATION AT SURFACE	2080 FNL 747 FWL	SWNW	12	9.0 S	20.0 E	S
Top of Uppermost Producing Zone	2080 FNL 747 FWL	SWNW	12	9.0 S	20.0 E	S
At Total Depth	2080 FNL 747 FWL	SWNW	12	9.0 S	20.0 E	S

21. COUNTY UINTAH	22. DISTANCE TO NEAREST LEASE LINE (Feet) 747	23. NUMBER OF ACRES IN DRILLING UNIT 600
	25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 1500	26. PROPOSED DEPTH MD: 10700 TVD:
27. ELEVATION - GROUND LEVEL 4719	28. BOND NUMBER WYB000291	29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE Permit #43-8496

ATTACHMENTS**VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES**

<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER	<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN
<input type="checkbox"/> AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)	<input type="checkbox"/> FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER
<input type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)	<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP

NAME Kevin McIntyre	TITLE Regulatory Analyst I	PHONE 720 929-6226
SIGNATURE	DATE 10/21/2008	EMAIL Kevin.McIntyre@anadarko.com
API NUMBER ASSIGNED 43047501630000	APPROVAL  Permit Manager	

Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Surf	12.25	9.625	0	2800		
Pipe	Grade	Length	Weight			
	Grade J-55 LT&C	2800	36.0			
	Cement Interval	Top (MD)	Bottom (MD)			
		0	2800			
		Cement Description	Class	Sacks	Yield	Weight
			Premium Foamed Cement	315	1.18	15.6

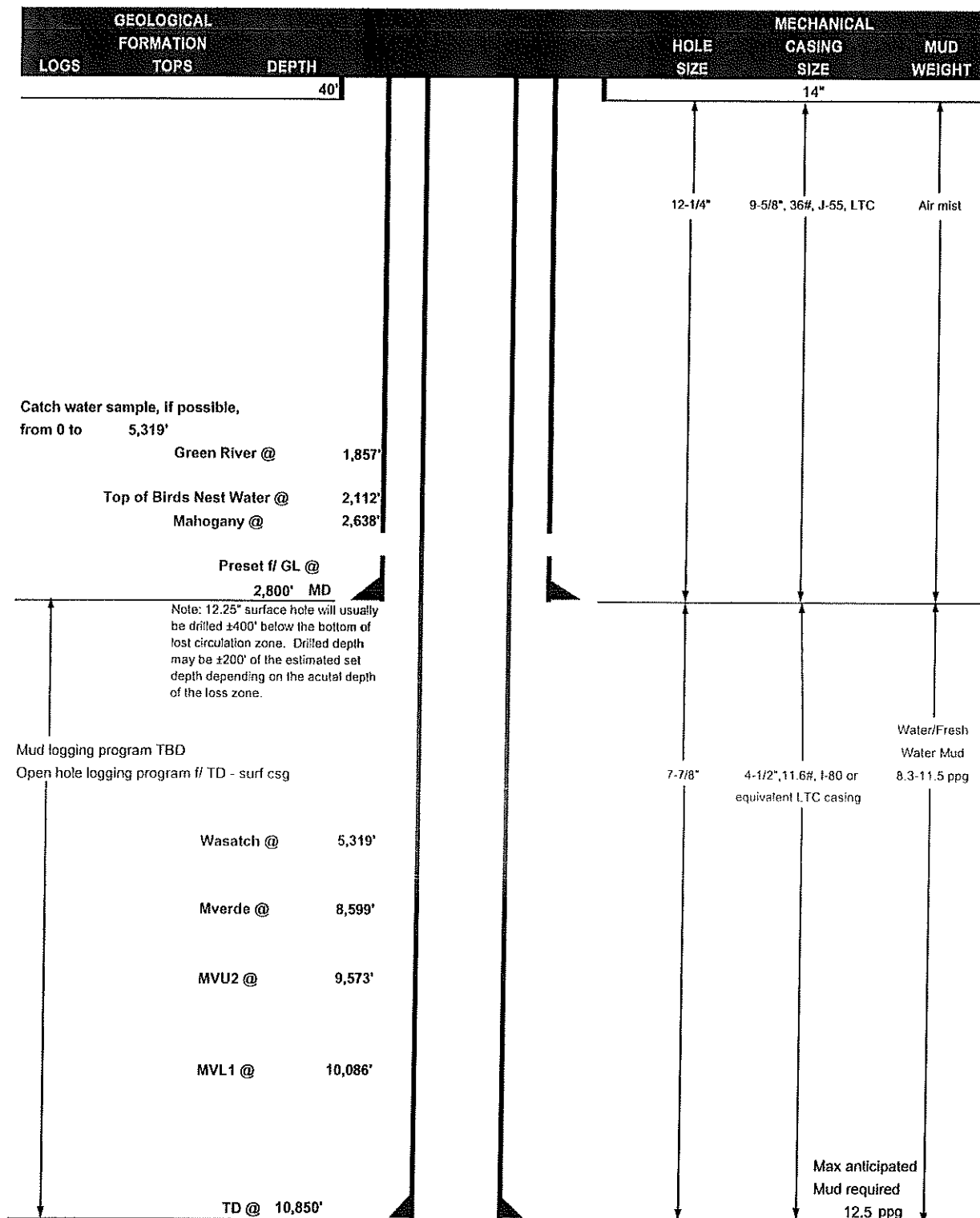
Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Prod	7.875	4.5	0	10700		
Pipe	Grade	Length	Weight			
	Grade I-80 LT&C	10700	11.6			
	Cement Interval	Top (MD)	Bottom (MD)			
		0	10700			
		Cement Description	Class	Sacks	Yield	Weight
			Premium Lite High Strength	530	3.38	11.0
			Pozzuolanic Cement	1690	1.31	14.3



KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

COMPANY NAME KERR-McGEE OIL & GAS ONSHORE LP DATE September 29, 2008
 WELL NAME NBU 920-12E TD 10,850' MD/TVD
 FIELD Natural Buttes COUNTY Uintah STATE Utah ELEVATION 4,719' GL KB 4,734'
 SURFACE LOCATION SWNW 2080' FNL & 747' FWL, Sec. 12, T 9S R 20E BHL Straight Hole
 Latitude: 40.051590 Longitude: -109.621340 NAD 27
 OBJECTIVE ZONE(S) Mesaverde/Wasatch
 ADDITIONAL INFO Regulatory Agencies: BLM (MINERALS), BIA (SURFACE), UDOGM, Tri-County Health Dept.



DRILLING PROGRAMCASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS		
						BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'						
SURFACE	9-5/8"	0 to 2,800'	36.00	J-55	LTC	3520	2020	453000
						0.75	1.54	5.13
PRODUCTION	4-1/2"	0 to 10850	11.60	I-80	LTC	7780	6350	201000
						1.67	0.90	1.83

1) Max Anticipated Surf. Press.(MASP) (Surface Casing) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point)

2) MASP (Prod Casing) = Pore Pressure at TD - (.22 psi/ft-partial evac gradient x TD)

(Burst Assumptions: TD = 12.5 ppg)

.22 psi/ft = gradient for partially evac wellbore

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

MASP 4340 psi

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE Option 1	LEAD	500	Premium cmt + 2% CaCl + .25 pps flocele	215	60%	15.60	1.18
	TOP OUT CMT (1)	250	20 gals sodium silicate + Premium cmt + 2% CaCl + .25 pps flocele	100		15.60	1.18
	TOP OUT CMT (2)	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
SURFACE Option 2	NOTE: If well will circulate water to surface, option 2 will be utilized						
	LEAD	2000	Prem cmt + 16% Gel + 10 pps gilsonite +.25 pps Flocele + 3% salt BWOC	230	35%	11.00	3.82
	TAIL	500	Premium cmt + 2% CaCl + .25 pps flocele	180	35%	15.60	1.18
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
PRODUCTION	LEAD	4,810'	Premium Lite II + 3% KCl + 0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	530	60%	11.00	3.38
	TAIL	6,040'	50/50 Poz/G + 10% salt + 2% gel +.1% R-3	1690	60%	14.30	1.31

*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe.
PRODUCTION	Float shoe, 1 jt, float collar. Centralize first 3 joints & every third joint to top of tail cement with bow spring centralizers.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. Test to 5,000 psi (annular to 2,500 psi) prior to drilling out. Record on chart recorder & tour sheet. Function test rams on each trip. Maintain safety valve & inside BOP on rig floor at all times. Kelly to be equipped with upper & lower kelly valves.

Drop Totco surveys every 2000'. Maximum allowable hole angle is 5 degrees.

Most rigs have PVT Systems for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER:

Brad Laney

DATE: _____

DRILLING SUPERINTENDENT:

Randy Bayne

DATE: _____

**NBU 920-12E
SWNW Sec. 12, T9S, R20E
UINTAH COUNTY, UTAH
UTU-0144868B**

ONSHORE ORDER NO. 1

DRILLING PROGRAM

1. Estimated Tops of Important Geologic Markers:

<u>Formation</u>	<u>Depth</u>
Uinta	0- Surface
Green River	1857'
Bird's Nest	2112'
Mahogany	2638'
Wasatch	5319'
Mesaverde	8599'
MVU2	9573'
MVL1	10,086'
TD	10,850'

2. Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

<u>Substance</u>	<u>Formation</u>	<u>Depth</u>
	Green River	1857'
	Bird's Nest	2112'
	Mahogany	2638'
Gas	Wasatch	5319'
Gas	Mesaverde	8599'
Gas	MVU2	9573'
Gas	MVL1	10,086'
Water	N/A	
Other Minerals	N/A	

3. Pressure Control Equipment (Schematic Attached)

Please see the Natural Buttes Unit Standard Operating Procedure (SOP).

4. Proposed Casing & Cementing Program:

Please see the Natural Buttes Unit SOP. See attached drilling diagram.

5. Drilling Fluids Program:

Please see the Natural Buttes Unit SOP.

6. Evaluation Program:

Please see the Natural Buttes Unit SOP.

7. **Abnormal Conditions:**

Maximum anticipated bottomhole pressure calculated at 10,850' TD, approximately equals 6727 psi (calculated at 0.62 psi/foot).

Maximum anticipated surface pressure equals approximately 4340 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

8. **Anticipated Starting Dates:**

Drilling is planned to commence immediately upon approval of this application.

9. **Variances:**

Please see Natural Buttes Unit SOP Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- *Blowout Prevention Equipment (BOPE) requirements;*
- *Mud program requirements; and*
- *Special drilling operation (surface equipment placement) requirements associated with air drilling.*

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

Background

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet.

The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12-1/4 inch hole

to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 12-1/4 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 9-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

Variance for Mud Material Requirements

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

Variance for Special Drilling Operation (surface equipment placement) Requirements

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot

light on the blowie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

Conclusion

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above..

10. Other Information:

Please see Natural Buttes Unit SOP.

The diagram illustrates a wellhead assembly and its associated piping system. The wellhead components, from top to bottom, are: DRILLING NIPPLE, HYDRIL, PIPE RAMS, BLIND RAMS, DRILLING SPOOL, and CASING HEAD. A FILLUP LINE with a valve is connected to the side of the drilling nipple. A FLOW LINE exits from the side of the drilling nipple. A KILL LINE, 2" MIN. in diameter, with two kill line valves and a check valve, 2" MIN. in diameter, is connected to the side of the drilling spool. A CHOKE LINE, 3" MIN. in diameter, is also connected to the side of the drilling spool. Below the wellhead, the piping system is detailed. It includes an ADJUSTABLE CHOKE, a REMOTELY OPERATED CHOKE, and a REMOTELY OPERATED VALVE. The system also features a BLEED LINE TO PITS, a BLEED LINE TO BUFFER TANK, and a BLEED LINE TO MUD/GAS SEPARATOR. The piping is labeled with diameters (2", 3", 4") and flow directions. A note indicates that the sequence is optional.

SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

**NBU 920-12E
SWNW Sec. 12 ,T9S,R20E
UINTAH COUNTY, UTAH
UTU-0144868B**

ONSHORE ORDER NO. 1

MULTI-POINT SURFACE USE & OPERATIONS PLAN

1. Existing Roads:

Refer to the attached location directions.

Refer to Topo Maps A and B for location of access roads within a 2-mile radius.

2. Planned Access Roads:

Approximately 465' +/- of new access road is proposed. Refer to Topo Map B.

Existence of pipelines; maximum grade; turnouts; major cut and fills, culverts, or bridges; gates, cattle guards, fence cuts, or modifications to existing facilities were determined at the on-site.

Please see the Natural Buttes Unit Standard Operating Procedure (SOP).

3. Location of Existing Wells Within a 1-Mile Radius:

Please refer to Topo Map C.

4. Location of Existing & Proposed Facilities:

Please see the Natural Buttes Unit SOP.

Refer to Topo Map D for the location of the proposed pipelines.

Variances to Best Management Practices (BMPs) Requested:

This exception to the BMP should be granted by the BLM Authorized Officer because indurated bedrock, such as sandstone, is at or within 2 feet of the surface and the soil has a poor history for successful rehabilitation.

All facilities will be painted within six months of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) will be excluded. The requested color is Shadow gray (2.5Y 6/2), a non-reflective earthtone.

Interim Surface Reclamation Plan:

This exception is requested due to the current twin and multi-well program. If determined that this well will not be a candidate for either twinning &/or multi-well the operator shall spread the topsoil pile on the location up to the rig anchor points. The location will be reshaped to the

original contour to the extent possible. The operator will reseed the area using the BLM recommended seed mixture and reclamation methods.

5. **Location and Type of Water Supply:**

Please see the Natural Buttes SOP.

6. **Source of Construction Materials:**

Please see the Natural Buttes SOP.

7. **Methods of Handling Waste Materials:**

Please see the Natural Buttes SOP.

A plastic reinforced liner is to be used as discussed during on-site inspection. It will be a minimum of 20 mil thick and felt, with sufficient bedding used to cover any rocks. The liner will overlap the pit walls and be covered with dirt and/or rocks to hold it in place. No trash or scrap that could puncture the liner will be disposed of in the pit.

Any produced water from the proposed well will be contained in a water tank and will then be hauled by truck to one of the pre-approved disposal sites: RNI, Sec. 5, T9S, R22E, NBU #159, Sec. 35, T9S R21E, Ace Oilfield, Sec. 2, T6S, R20E, MC&MC, Sec. 12, T6S, R19E, Pipeline Facility Sec. 36, T9S, R20E, Goat Pasture Evaporation Pond SW/4 Sec. 16, T10S, R22E, Bonanza Evaporation Pond Sec. 2, T10S, R23E (*Request is in lieu of filing Form 3160-5, after initial production*).

8. **Ancillary Facilities:**

Please see the Natural Buttes SOP.

9. **Well Site Layout:** (See Location Layout Diagram)

The attached Location Layout Diagram describes drill pad cross-sections, cuts and fills, and locations of the mud tanks, reserve pit, flare pit, pipe racks, trailer parking, spoil dirt stockpile(s), and surface material stockpile(s).

Please see the attached diagram to describe rig orientation, parking areas, and access roads.

Location size may change prior to the drilling of the well due to the current rig availability. If the proposed location is not large enough to accommodate the drilling rig. The location will be re-surveyed and a form 3160-5 will be submitted.

10. Plans for Reclamation of the Surface:

Please see the Natural Buttes SOP.

Operator shall call the BIA for the seed mixture when the final reclamation occurs.

11. Surface/Mineral Ownership:

The well pad and access road are located on lands owned by:

Ute Indian Tribe
P.O. Box 70
Fort Duchesne, Utah 84026
(435) 722-5141

The mineral ownership is listed below:

United States of America
Bureau of Land Management
170 South 500 East
Vernal, UT 84078
(435)781-4400

12. Stipulations/Notices/Mitigation:

There are no stipulations or notices for this location.

13. Other Information:

A Class III archaeological survey and a paleontological survey have been performed and will be submitted.

This location is not within 460' from the boundary of the Natural Buttes Unit, nor is it within 460' of any non-committed tract lying within the boundaries of the Unit.

14. Lessee's or Operator's Representative & Certification:

Kevin McIntyre
Regulatory Analyst
Kerr-McGee Oil & Gas Onshore LP
P.O. Box 173779
Denver, CO 80217-3779
(720) 929-6226

Randy Bayne
Drilling Manager
Kerr-McGee Oil & Gas Onshore LP
1368 South 1200 East
Vernal, UT 84078
(435) 781-7018

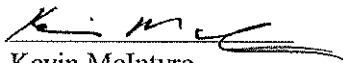
Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under the terms and conditions of the lease for the operations conducted upon leased lands.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Bureau of Land Management Nationwide Bond #WYB000291.

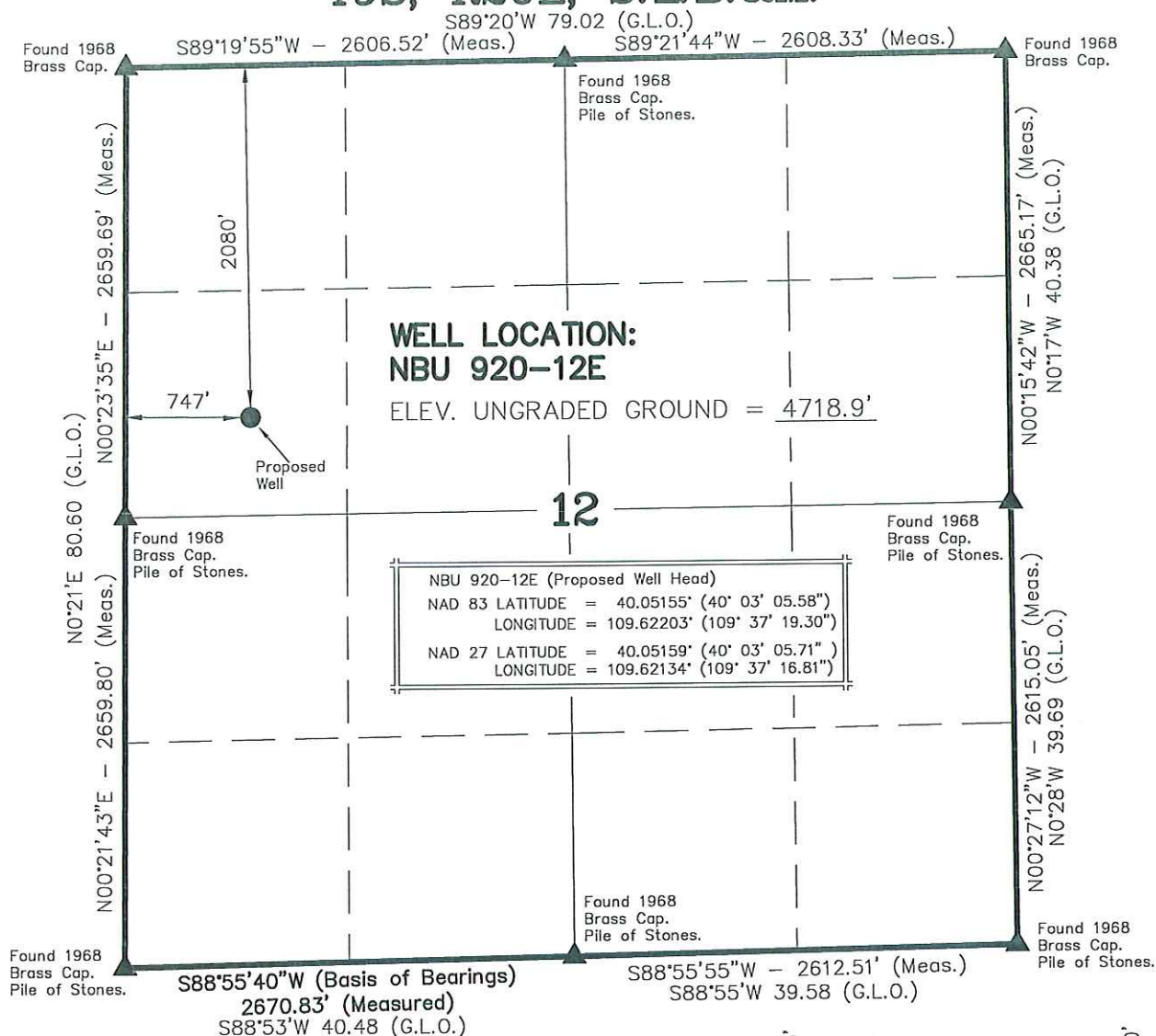
I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed by the Operator, its contractors, and subcontractors in conformity with this plan and the terms and conditions under which it is approved.


Kevin McIntyre

9/29/2008

Date

T9S, R20E, S.L.B.&M.



NOTES:

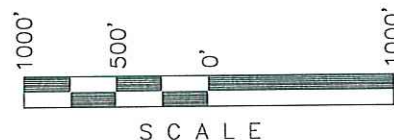
 = Section Corners Located

1. Well footages are measured at right angles to the Section Lines.
2. G.L.O. distances are shown in feet or chains. 1 chain = 66 feet.
3. Bearings are based on Global Positioning Satellite observations.
4. Basis of elevation is the Northwest Corner of Section 12, T9S, R20E, S.L.B.&M. The elevation of this Section Corner is shown on the Ouray SE 7.5 Min. Quadrangle as being 4676'.

Kerr-McGee
Oil & Gas Onshore, LP
1099 18th Street - Denver, Colorado 80202

NBU 920-12E
WELL PLAT
2080' FNL, 747' FWL
SW $\frac{1}{4}$ NW $\frac{1}{4}$ OF SECTION 12, T9S, R20E,
S.L.B.&M. UINTAH COUNTY, UTAH.

CONSULTING, LLC
371 Coffeen Avenue
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182



SURVEYOR'S CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS
PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS
MADE BY ME OR UNDER MY SUPERVISION AND THAT
THE SAME ARE TRUE AND CORRECT TO THE BEST OF
MY KNOWLEDGE AND BELIEF. No. 6028691

REGISTERED LAND SURVEYOR
REGISTRATION No. 6028691
STATE OF UTAH

TIMBERLINE (435) 789-1365
ENGINEERING & LAND SURVEYING, INC.
38 WEST 100 NORTH - VERNAL, UTAH 84078

DATE SURVEYED: 06-23-08	SURVEYED BY: M.S.B.	SHEET 1 OF 9
DATE DRAWN: 07-07-08	DRAWN BY: B.R.B.	
SCALE: 1" = 1000' Date Last Revised:		

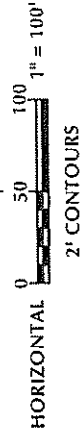
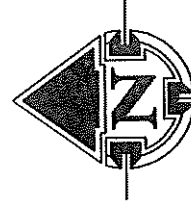
WELL PAD LEGEND

- WELL LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)

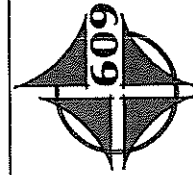
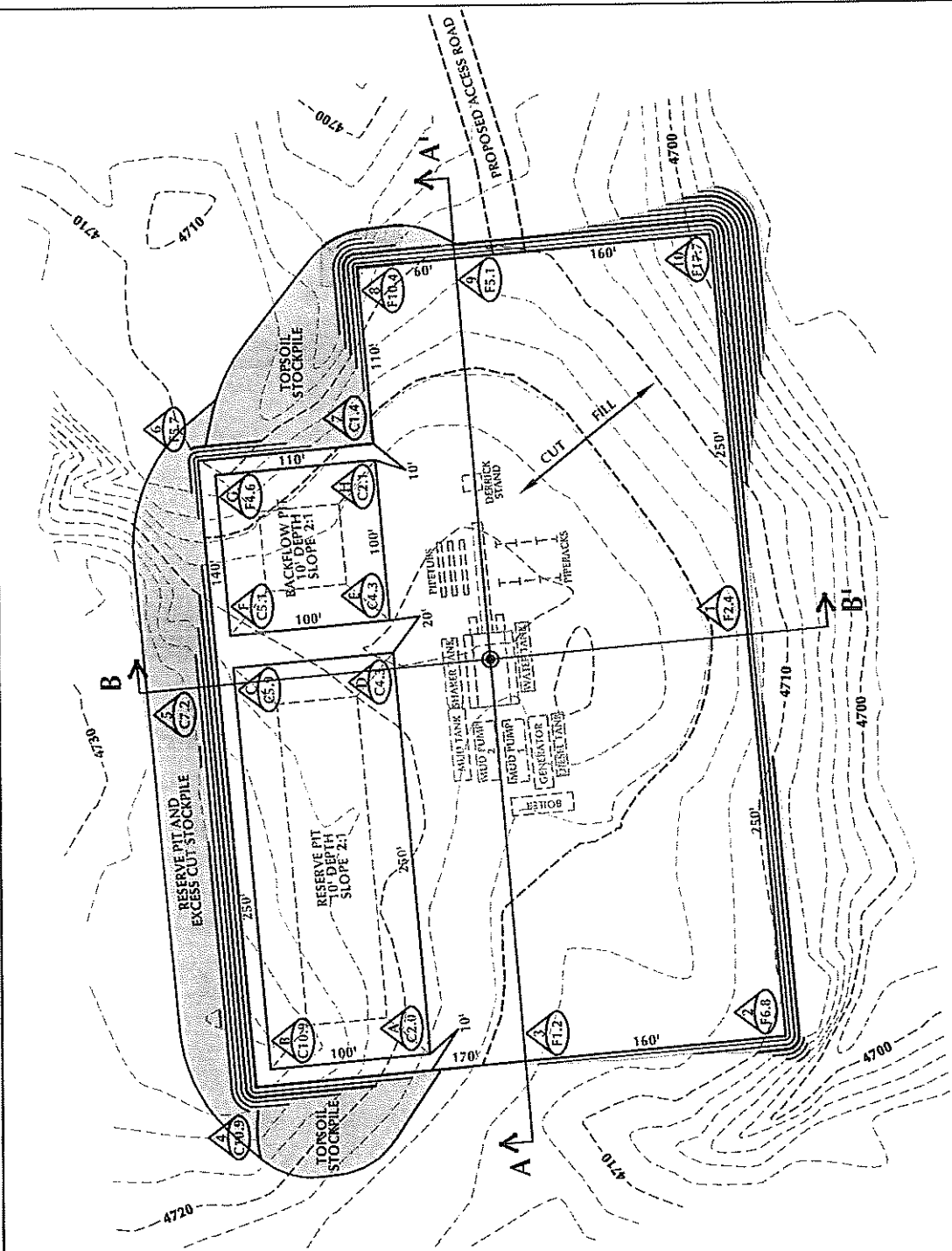
WELL PAD NBU 920-12E QUANTITIES

EXISTING GRADE @ LOC. STAKE = 4,718.9'
FINISHED GRADE ELEVATION = 4,715.7'
CUT SLOPES = 1.5:1
FILL SLOPES = 1.5:1

TOTAL CUT FOR WELL PAD = 12,752 C.Y.
TOTAL FILL FOR WELL PAD = 11,902 C.Y.
TOPSOIL @ 6" DEPTH = 3,189 C.Y.
TOTAL DISTURBANCE = 3.95 ACRES
SHRINKAGE FACTOR = 1.10
SWELL FACTOR = 1.00
RESERVE PIT CAPACITY (2' OF FREEBOARD)
+/- 25,880 BARRELS
RESERVE PIT VOLUME
+/- 7,185 CY
BACKFLOW PIT CAPACITY (2' OF FREEBOARD)
+/- 8,780 BARRELS
BACKFLOW PIT VOLUME
+/- 2,520 CY



Timberline
Engineering & Land Surveying, Inc.
38 WEST 100 NORTH
VERNAL, UTAH 84078
(435) 789-1365



CONSULTING, LLC
371 Coffeen Avenue
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

KERR-MCGEE OIL & GAS
ONSHORE L.P.

1099 18th Street - Denver, Colorado 80202

NBU 920-12E

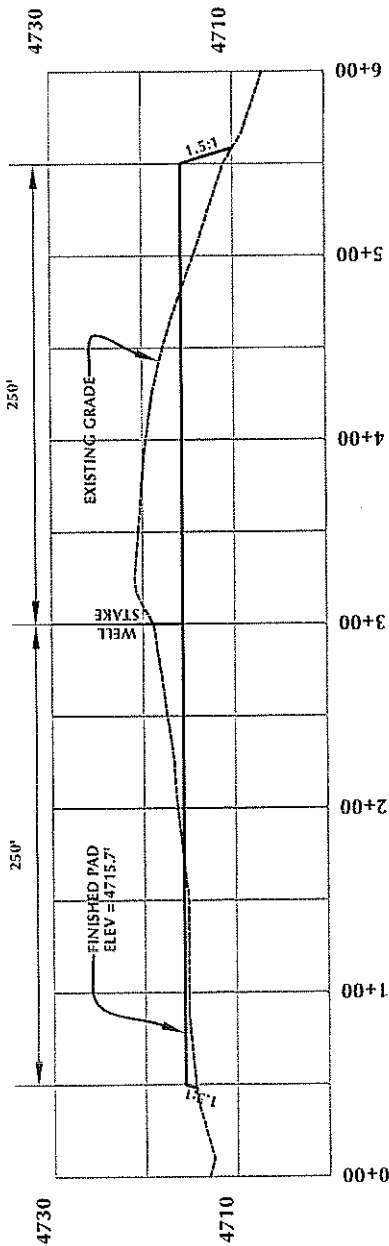
WELL PAD - LOCATION LAYOUT
2080' FNL, 747' FWL

SW1/4NW1/4, SECTION 12, T.9S., R.20E.
S.L.B.&M., Uintah County, UTAH

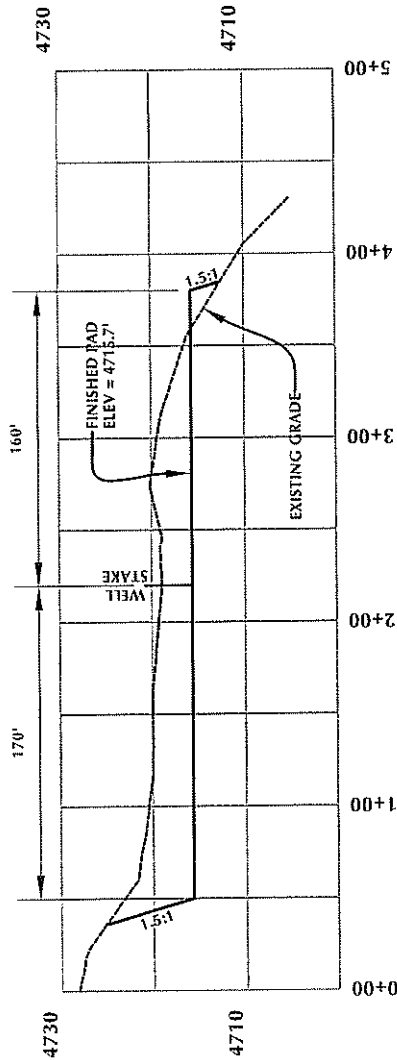
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BY: [Signature]
DATE: [Blank]
REVISD: [Blank]

SHEET NO:
2

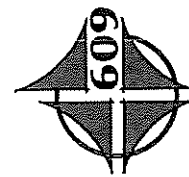
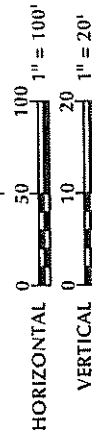
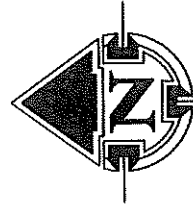
2 OF 9



CROSS SECTION A-A'



CROSS SECTION B-B'



**KERR-MCGEE OIL & GAS
ONSHORE L.P.**

1099 18th Street - Denver, Colorado 80202

NBU 920-12E

WELL PAD - CROSS SECTIONS

2080' FNL, 747' FWL

SW1/4NW1/4, SECTION 12, T.9S., R.20E.

S.L.B.&M., UINTAH COUNTY, UTAH

CONSULTING, LLC
371 Coffeen Avenue
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

Scale: 1"=100'	Date: 9/9/08	SHEET NO:
REVISED:	BY	3
	DATE	3 OF 9

Timberline
Engineering & Land Surveying, Inc.
38 WEST 100 NORTH
VERNAL, UTAH 84078
(435) 789-1365



PHOTO VIEW: FROM CORNER #5 TO LOCATION STAKE

CAMERA ANGLE: SOUTHERLY



PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: WESTERLY

Kerr-McGee
Oil & Gas Onshore, LP
 1099 15th Street - Denver, Colorado 80202

NBU 920-12E
 2080' FNL, 747' FWL
 SW $\frac{1}{4}$ NW $\frac{1}{4}$ OF SECTION 12, T9S, R20E,
 S.L.B.&M. UINTAH COUNTY, UTAH.



CONSULTING, LLC
 371 Coffeen Avenue
 Sheridan WY 82501
 Phone 307-674-0609
 Fax 307-674-0152

LOCATION PHOTOS

TAKEN BY: M.S.B.

DRAWN BY: J.R.S.

DATE TAKEN: 6-20-08

DATE DRAWN: 8-26-08

REVISED:

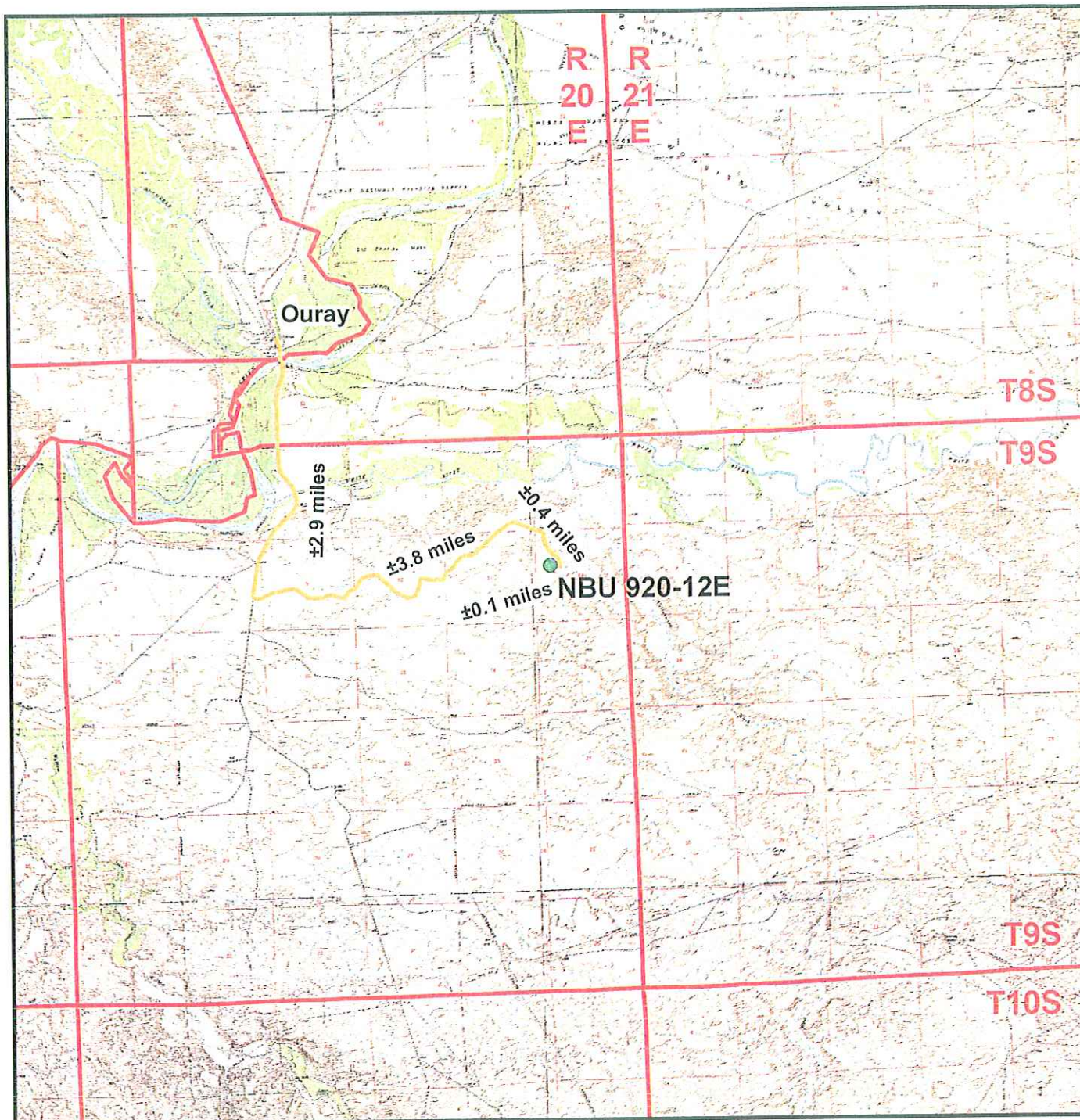
Timberline (435) 789-1355
 Engineering & Land Surveying, Inc.
 38 WEST 100 NORTH VERNAL, UTAH 84078

SHEET
 4
 OF 9

Kerr-McGee Oil & Gas Onshore, LP
NBU 920-12E
Section 12, T9S, R20E, S.L.B.&M.

PROCEED IN A WESTERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 13.9 MILES TO THE JUNCTION OF STATE HIGHWAY 88. EXIT LEFT AND PROCEED IN A SOUTHERLY DIRECTION ALONG STATE HIGHWAY 88 APPROXIMATELY 16.8 MILES TO OURAY, UTAH. FROM OURAY, PROCEED IN A SOUTHERLY DIRECTION ALONG THE SEEP RIDGE ROAD (COUNTY B ROAD 2810) APPROXIMATELY 2.9 MILES TO THE INTERSECTION OF AN EXISTING ROAD TO THE EAST. EXIT LEFT AND PROCEED IN A NORTHEASTERLY DIRECTION ALONG EXISTING ROAD APPROXIMATELY 3.8 MILES TO THE INTERSECTION OF AN EXISTING ROAD TO THE SOUTH. EXIT RIGHT AND PROCEED IN A SOUTHERLY DIRECTION ALONG EXISTING ROAD APPROXIMATELY 0.4 MILES TO THE PROPOSED ACCESS ROAD. FOLLOW ROAD FLAGS IN A SOUTHWESTERLY DIRECTION APPROXIMATELY 465 FEET TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 37.9 MILES IN A SOUTHERLY DIRECTION.



Legend

- Proposed NBU 920-12E Well Location
- Access Route - Proposed

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street, Denver, Colorado 80202

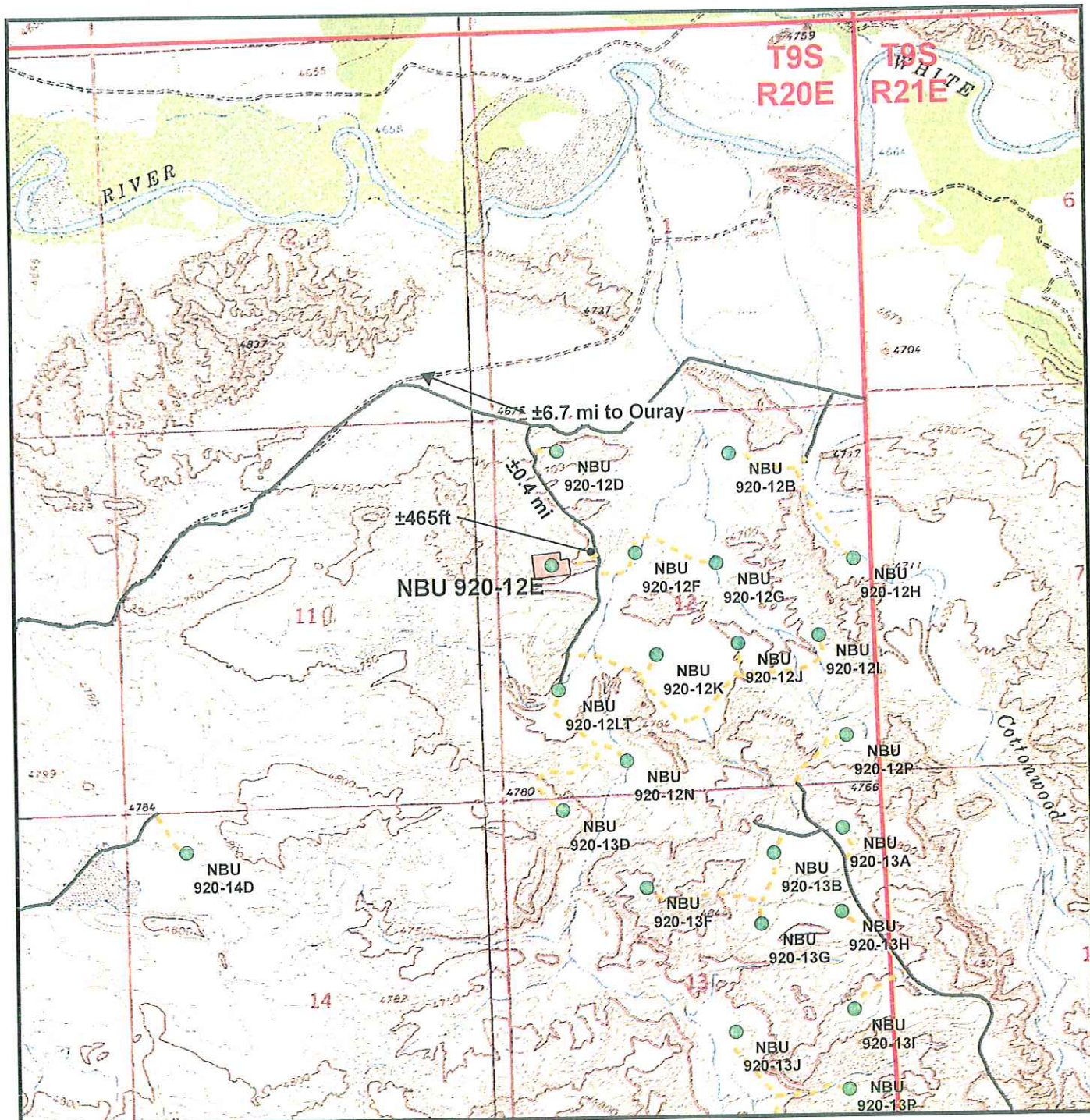
NBU 920-12E
Topo A
2080' FNL, 747' FWL
SW¼ NW¼, Section 12, T9S, R20E
S.L.B.&M., Uintah County, Utah



CONSULTING, LLC
371 Coffeen Avenue
Sheridan, WY 82801
Phone (307) 674-0609
Fax (307) 674-0182



Scale: 1:100,000	NAD83 USP Central	Sheet No:
Drawn: JELO	Date: 8 Sept 2008	5
Revised:	Date:	5 of 9



Legend

- Well - Proposed Well Pad --- Road - Proposed
— Road - Existing

Total Proposed Road Length = ±465ft

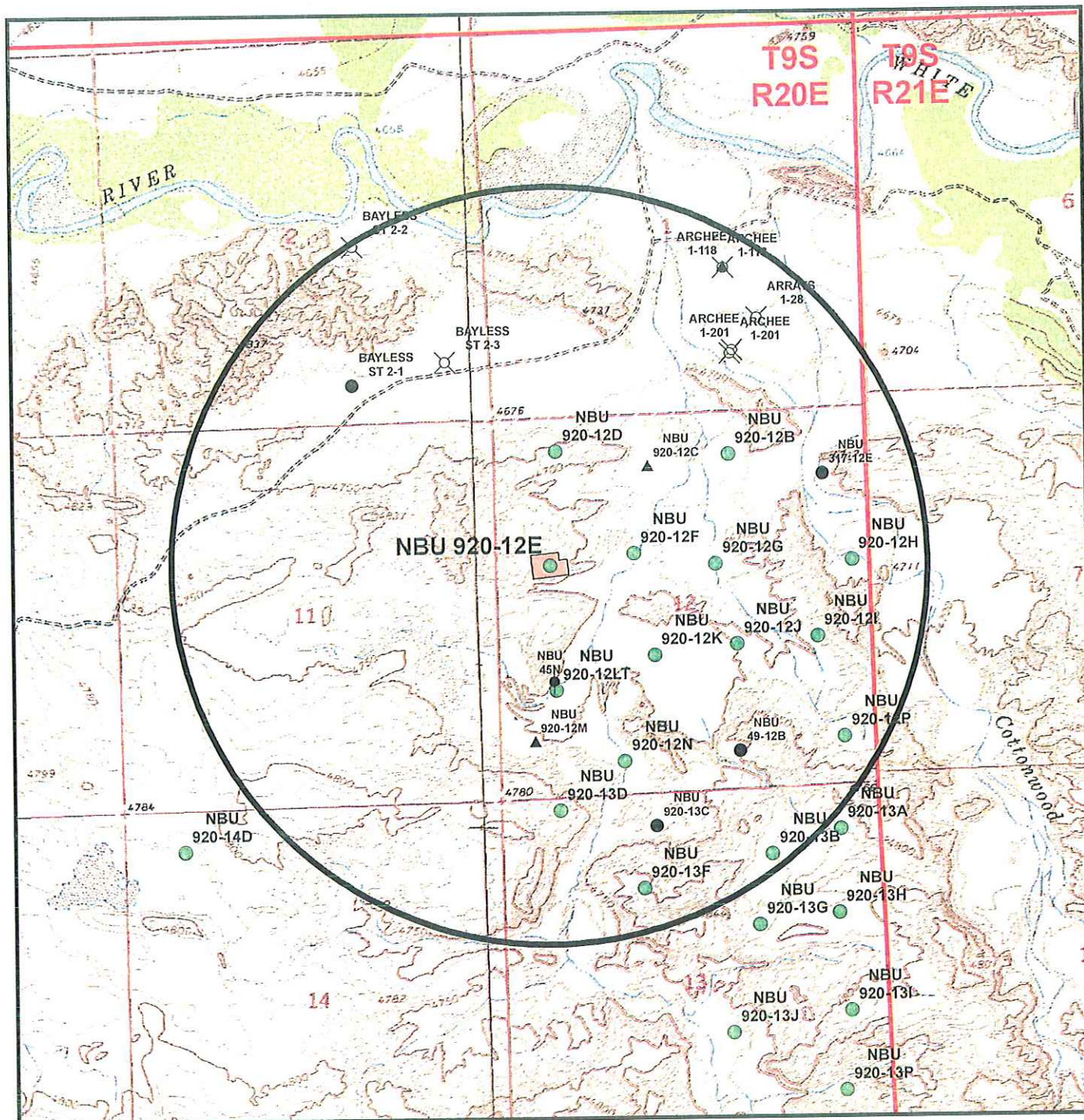
Kerr-McGee Oil & Gas Onshore, LP
 1099 18th Street, Denver, Colorado 80202

NBU 920-12E
Topo B
 2080' FNL, 747' FWL
 SW¼ NW¼, Section 12, T9S, R20E
 S.L.B.&M., Uintah County, Utah



CONSULTING, LLC
 371 Colleen Avenue
 Sheridan, WY 82801
 Phone (307) 674-0609
 Fax (307) 674-0182

Scale: 1" = 2000ft	NAD83 USP Central	Sheet No:
Drawn: JELO	Date: 8 Sept 2008	6
Revised:	Date:	6 of 9



Legend

- Well - Proposed
- Well - 1 Mile Radius
- Well Pad

Well locations derived from State of Utah, Dept. of Natural Resources, Division of Oil, Gas and Mining

- Producing
- ▲ Approved permit (APD); not yet spudded
- Spudded (Drilling commenced; Not yet complete)
- ✕ Location Abandoned
- Temporarily-Abandoned
- ✕ Plugged and Abandoned
- ⬮ Shut-In

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street, Denver, Colorado 80202

NBU 920-12E
Topo C
2080' FNL, 747' FWL
SW¼ NW¼, Section 12, T9S, R20E
S.L.B.&M., Uintah County, Utah



CONSULTING, LLC
371 Coffeen Avenue
Sheridan, WY 82801
Phone (307) 674-0609
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Scale: 1" = 2000ft	NAD83 USP Central	Sheet No:
Drawn: JELO	Date: 8 Sept 2008	7
Revised:	Date:	

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Total Proposed Pipeline Length: ±670ft

- Well - Proposed Well Pad Pipeline - Proposed Road - Proposed
Pipeline - Existing Road - Existing

CONSULTING, LLC
371 Coffeen Avenue
Sheridan, WY 82801
Phone (307) 674-0609
Fax (307) 674-0182



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IPC #08-142

Paleontological Reconnaissance Survey Report

**Survey of Kerr McGee's Proposed Well Pads, Access Roads, and
Pipelines for "NBU #920-12B, D, E, F, G, H, I, J & K;
#920-13A, B & H" (Sec. 12 & 13, T 9 S, R 20 E)**

Ouray SE
Topographic Quadrangle
Uintah County, Utah

June 28, 2008

Prepared by Stephen D. Sandau
Paleontologist for
Intermountain Paleo-Consulting
P. O. Box 1125
Vernal, Utah 84078

INTRODUCTION

At the request of Raleen White of Kerr McGee Onshore LP and authorized by Bruce Pargeets of the Ute Indian Tribe and by Lynn Becker, EMD Land Division Manager of the Ute Indian Tribe's Energy and Minerals Department, a paleontological reconnaissance survey of Kerr McGee's proposed well pads, access roads, and pipelines for "NBU #920-12B, D, E, F, G, H, I, J & K; #920-13A, B & H" (Sec. 12 & 13, T 9 S, R 20 E) was conducted by Stephen D. Sandau, Arica Scheetz and Amanda Dopheide on June 26, 2008. The survey was conducted under the Ute Indian Tribe Business License FY 2008, #A08-1308 and the accompanying Access Permit (effective 3/26/2008 through 9/30/2008). This survey to locate, identify and evaluate paleontological resources was done to meet requirements of the National Environmental Policy Act of 1969 and other State and Federal laws and regulations that protect paleontological resources.

FEDERAL AND STATE REQUIREMENTS

As mandated by the Federal and State government, paleontologically sensitive geologic formations on State lands that are considered for exchange or may be impacted due to ground disturbance require paleontological evaluation. This requirement complies with:

- 1) The National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321 et. Seq., P.L. 91-190);
- 2) The Federal Land Policy and Management Act (FLPMA) of 1976 (90 Stat. 2743, 43 U.S.C. § 1701-1785, et. Seq., P.L. 94-579) and
- 3) The National Historic Preservation Act. 16 U.S.C. § 470-1, P.L. 102-575 in conjunction with 42 U.S.C. § 5320

The new Potential Fossil Yield Classification (PFYC) System (October, 2007) replaces the Condition Classification System from Handbook H-8270-1. Geologic units are classified based on the relative abundance of vertebrate fossils or scientifically significant invertebrate or plant fossils and their sensitivity to adverse impacts, with a higher class number indicating a higher potential.

- **Class 1 – Very Low.** Geologic units (igneous, metamorphic, or Precambrian) not likely to contain recognizable fossil remains.
- **Class 2 – Low.** Sedimentary geologic units not likely to contain vertebrate fossils or scientifically significant non-vertebrate fossils. (Including modern colian, fluvial and colluvial deposits etc...)
- **Class 3 – Moderate or Unknown.** Fossiliferous sedimentary geologic units where fossil content varies in significance, abundance, and predictable occurrence; or sedimentary units of unknown fossil potential.
 - **Class 3a – Moderate Potential.** The potential for a project to be sited on or impact a significant fossil locality is low, but is somewhat higher for common fossils.
 - **Class 3b – Unknown Potential.** Units exhibit geologic features and preservational conditions that suggest significant fossils could be present, but little information about the paleontological resources of the unit or the area is known.

- **Class 4 – High.** Geologic units containing a high occurrence of vertebrate fossils or scientifically significant invertebrate or plant fossils, but may vary in abundance and predictability.
 - **Class 4a** – Outcrop areas with high potential are extensive (greater than two acres) and paleontological resources may be susceptible to adverse impacts from surface disturbing actions.
 - **Class 4b** – Areas underlain by geologic units with high potential but have lowered risks of disturbance due to moderating circumstances such as a protective layer of soil or alluvial material; or outcrop areas are smaller than two contiguous acres.
- **Class 5 – Very High.** Highly fossiliferous geologic units that consistently and predictably produce vertebrate fossils or scientifically significant invertebrate or plant fossils.
 - **Class 5a** - Outcrop areas with very high potential are extensive (greater than two acres) and paleontological resources may be susceptible to adverse impacts from surface disturbing actions.
 - **Class 5b** - Areas underlain by geologic units with very high potential but have lowered risks of disturbance due to moderating circumstances such as a protective layer of soil or alluvial material; or outcrop areas are smaller than two contiguous acres.

It should be noted that many fossils, though common and unimpressive in and of themselves, can be important paleo-environmental, depositional, and chronostratigraphic indicators.

LOCATION

Kerr McGee's proposed well pads, access roads, and pipelines for "NBU #920-12B, D, E, F, G, H, I, J & K; #920-13A, B & H" (Sec. 12 & 13, T 9 S, R 20 E) are located on Ute Indian Reservation land about 1 miles south of the White River and some 3.5 miles southeast of Ouray, Utah. The project area can be found on the Ouray SE 7.5 minute U. S. Geological Survey Quadrangle Map, Uintah County, Utah.

PREVIOUS WORK

The basins of western North America have long produced some of the richest fossil collections in the world. Early Cenozoic sediments are especially well represented throughout the western interior. Paleontologists started field work in Utah's Uinta Basin as early as 1870 (Betts, 1871; Marsh, 1871, 1875a, 1875b). The Uinta Basin is located in the northeastern corner of Utah and covers approximately 31,000 sq. km (12,000 sq. miles) ranging in elevation from 1,465 to 2,130 m (4,800 to 7,000 ft) (Marsell, 1964; Hamblin et al., 1987). Middle to late Eocene time marked a period of dramatic change in the climate, flora, (Stucky, 1992) and fauna (Black and Dawson, 1966) of North America.

GEOLOGICAL AND PALEONTOLOGICAL OVERVIEW

Early in the geologic history of Utah, some 1,000 to 600 Ma, an east-west trending basin developed creating accommodation for 25,000 feet of siliclastics. Uplift of that filled-basin during the early Cenozoic formed the Uinta Mountains (Rasmussen et al., 1999). With the rise of the Uinta Mountains the asymmetrical synclinal Uinta Basin is thought to have formed through the effects of down warping in connection with the uplift. Throughout the Paleozoic and Mesozoic deposition fluctuated between marine and non-marine environments laying down a thick succession of sediments in the area now occupied by the Uinta Basin. Portions of these beds crop out on the margins of the basin due to tectonic events during the late Mesozoic.

Early Tertiary Uinta Basin sediments were deposited in alternating lacustrine and fluvial environments. Large shallow lakes periodically covered most of the basin and surrounding areas during early to mid Eocene time (Abbott, 1957). These lacustrine sediments show up in the western part of the basin, dipping 2-3 degrees to the northeast and are lost in the subsurface on the east side. The increase of cross-bedded, coarse-grained sandstone and conglomerates preserved in paleo-channels indicates a transition to a fluvial environment toward the end of the epoch.

Four Eocene formations are recognized in the Uinta Basin: the Wasatch, Green River, Uinta and Duchesne River, respectively (Wood, 1941). The Uinta Formation is subdivided into two lithostratigraphic units namely: the Wagonhound Member (Wood, 1934), formerly known as Uinta A and B (Osborn, 1895, 1929) and the Myton Member previously regarded as the Uinta C.

Within the Uinta Basin in northeast Utah, the Uinta Formation in the western part of the basin is composed primarily of lacustrine sediments inter-fingering with over-bank deposits of silt, and mudstone and westward flowing channel sands and fluvial clays, muds, and sands in the east (Bryant et al, 1990; Ryder et al, 1976). Stratigraphic work done by early geologists and paleontologists within the Uinta Formation focused on the definition of rock units and attempted to define a distinction between early and late Uintan faunas (Riggs, 1912; Peterson and Kay, 1931; Kay 1934). More recent work focused on magnetostratigraphy, radioscopic chronology, and continental biostratigraphy (Flynn, 1986; Prothero, 1996). Well-known for its fossiliferous nature and distinctive mammalian fauna of mid-Eocene Age, the Uinta Formation is the type formation for the Uintan Land Mammal Age (Wood et al, 1941).

The Duchesne River Formation of the Uinta Basin in northeastern Utah is composed of a succession of fluvial and flood plain deposits composed of mud, silt, and sandstone. The source area for these late Eocene deposits is from the Uinta Mountains indicated by paleocurrent data (Anderson and Picard, 1972). In Peterson's (1931c) paper, the name "Duchesne Formation" was applied to the formation and it was later changed to the "Duchesne River Formation" by Kay (1934). The formation is divided up into four members: the Brennan Basin, Dry Gulch Creek, LaPoint, and Starr Flat (Anderson and Picard, 1972). Debates concerning the Duchesne River Formation, as to whether its age was late Eocene or early Oligocene, have surfaced throughout the literature of the last century (Wood et al., 1941; Scott 1945). Recent paleo-magnetostratigraphic work (Prothero, 1996) shows that the Duchesne River Formation is late Eocene in time.

FIELD METHODS

In order to determine if the proposed project area contained any paleontological resources, a reconnaissance survey was performed. An on-site observation of the proposed areas undergoing surficial disturbance is necessary because judgments made from topographic maps alone are often unreliable. Areas of low relief have potential to be erosional surfaces with the possibility of bearing fossil materials rather than surfaces covered by unconsolidated sediment or soils.

When found within the proposed construction areas, outcrops and erosional surfaces were checked to determine if fossils were present and to assess needs. Careful effort is made during surveys to identify and evaluate significant fossil materials or fossil horizons when they are found. Microvertebrates, although rare, are occasionally found in anthills or upon erosional surfaces and are of particular importance.

PROJECT AREA

The project area is situated in the Wagonhound Member (Uinta A & B) of the Uinta Formation. The following list provides a description of the individual wells and their associated pipelines and access roads.

NBU #920-12B

The proposed access road and pipeline travel approximately 500 ft west until they meet the proposed well pad for "NBU 920-12B" in the NW/NE quarter-quarter section of Sec. 12, T 9 S, R 20 E (Figure 1). The proposed access road, pipeline and well pad are staked on sloping ground covered by colluvium, outcrops of purple sandstone composed of subrounded, medium to coarse grains, and outcrops of light gray sandstone composed of subrounded, medium grains. The purple sandstone outcrops were observed approximately 20 ft south from the proposed pipeline and the light gray outcrops were observed approximately 10 ft west of the center stake. Isolated fragments of *Echmatemys* carapace and plastron were found around the purple sandstone.

NBU #920-12D

The proposed access road travels east where it meets the proposed well pad for "NBU 920-12D" in the NW/NW quarter-quarter section of Sec. 12, T 9 S, R 20 E (Figure 1). The proposed access road and well pad are staked on relatively flat ground covered almost entirely by eolian wind deposits. Although the ground is mostly covered in eolian blown sand, there was an outcrop of light brown sandstone composed of subrounded, medium grains approximately 10 feet east from the center stake. Isolated pieces of turtle carapace and plastron belonging to *Echmatemys* and pieces of a mammalian skull with enamel shards were found scattered around the sandstone, and a partial *Echmatemys* specimen was found *in-situ*.

NBU #920-12E

The proposed access road and pipeline travel east approximately 500 ft until meeting the proposed well pad for 'NBU 920-12E' in the SW/NW quarter-quarter section of Sec. 12, T 9 S, R 20 E (Figure 1). The proposed access road, pipeline, and well pad are staked on sloping ground that is covered by colluvium, reworked washout deposits, and large outcrops of purple sandstone composed of subrounded, medium to coarse grains. Fossils found in the area consisted of isolated pieces of carapace and plastron belonging to *Echmatemys* and a large bone fragment (brontothere?).

NBU #920-12F

The proposed access road and pipeline travel west approximately 500 ft from the existing road until they meet the proposed well pad for "NBU 920-12F" in the SE/NW quarter-quarter section of Sec. 12, T 9 S, R 20 E (Figure 1). The proposed access road, pipeline, and well pad are staked on relatively flat ground covered with colluvium and reworked washout deposits. No fossils were found.

NBU #920-12G

The proposed access road and pipeline travel west approximately 1,500 ft from the existing road until they meet the proposed well pad in the SW/NE quarter-quarter section of Sec. 12, T 9 S, R 20 E (Figure 1). The proposed access road, pipeline, and well pad are staked on relatively flat ground covered with colluvium and reworked washout deposits. No fossils were found.

NBU #920-12H

The proposed access road and pipeline travel approximately 500 ft southeast until they meet the proposed well pad for "NBU 920-12H" in the SE/NE quarter-quarter section of Sec. 12, T 9 S, R 20 E (Figure 1). The proposed access road, pipeline, and well pad are staked on sloping ground covered by colluvium and outcrops of purple sandstone composed of subrounded, medium grains. The purple sandstone outcrop was observed approximately 30 ft from south from the center stake, and 20 ft east of the proposed pipeline. Fossils found in the area included isolated fragments of *Echmatemys* carapace and plastron.

NBU #920-12I

The proposed access road and pipeline travel approximately 2,000 ft east until they meet with the proposed well pad "NBU 920-12I" in the NE/SE quarter-quarter section of Sec. 12, T 9 S, R 20 E (Figure 1). The proposed access road, pipeline, and well pad are staked on sloping ground covered by colluvium and outcrops of purple sandstone composed of subrounded, medium grains that are approximately 20 ft south of the proposed pipeline and well pad. Isolated fragments of turtle carapace and plastron belonging to *Echmatemys* were found around the sandstone and four highly weathered vertebrae possibly belonging to the suborder serpentes were found approximately 10 ft from the center stake.

NBU #920-12J

The proposed access road and pipeline branch off from the proposed access road and pipeline to "NBU 920-12I" and travel north to proposed well pad "NBU 920-12J" in the NW/SE quarter-section of Sec. 12, T 9 S, R 20 E (Figure 1). The proposed access road, pipeline, and well pad are staked on sloping ground covered by colluvium and an outcrop of purple sandstone composed subrounded, medium grains. The outcrop of sandstone lies approximately 20 ft south from the proposed pipeline and well pad. Isolated fragments of *Echmatemys* carapace and plastron were found around the sandstone.

NBU #920-12K

The proposed access road and pipeline branch off the proposed access road and pipeline for "NBU 920-12I" and travel north to proposed well pad "NBU 920-12K" in the NE/SW quarter-section of Sec. 12, T 9 S, R 20 E (Figure 1). The proposed access road, pipeline, and well pad are staked on sloping ground that is covered by colluvium and out crops of purple sandstone composed of subrounded, medium grains. The outcrop of sandstone lies approximately 20 ft south from the proposed pipeline and well pad. Isolated fragments of *Echmatemys* carapace and plastron were found around the sandstone.

NBU #920-13A

The proposed access road and pipeline travel east from the existing road until they meet the proposed well pad for "NBU 920-13A" in the NW/NE quarter-quarter section of Sec. 13, T 9 S, R 20 E (Figure 1). The proposed access road, pipeline, and well pad are staked on relatively flat ground covered by colluvium and purple outcrops of sandstone composed of subrounded, medium grains. The outcrops of purple sandstone were observed approximately 20 ft southeast of the central stake. Fossils found included several fragments of *Echmatemys* that were loosely associated to each other.

NBU #920-13B

The proposed access road and pipeline travel southwest from the existing road until they meet the proposed well pad for "NBU 920-13B" in the NW/NE quarter-quarter section of Sec. 13, T 9 S, R 20 E (Figure 1). The proposed access road, pipeline, and well pad are staked on relatively flat ground covered by colluvium and outcrops of purple sandstone composed of subrounded, medium grains. The outcrop of sandstone was observed approximately 20 ft west and 30 ft south from the well pad. Fossils found in the area included isolated fragments of *Echmatemys* carapace and plastron.

NBU #920-13H

The proposed access road and pipeline travel west from the existing road until they meet the proposed well pad for "NBU 920-13H" in the SE/NE quarter-quarter section of Sec. 13, T 9 S, R 20 E (Figure 1). The proposed access road, pipeline, and well pad are staked on flat ground that is covered by colluvium. No fossils were found.

SURVEY RESULTS

PROJECT	GEOLOGY	PALEONTOLOGY
"NBU #920-12B" (Sec. 12, T 9 S, R 20, E)	The proposed access road, pipeline and well pad are staked on sloping ground covered by colluvium, outcrops of purple sandstone composed of subrounded, medium to coarse grains, and outcrops of light gray sandstone composed of subrounded, medium grains. The purple sandstone outcrops were observed approximately 20 ft south from the proposed pipeline and the light gray outcrops were observed approximately 10 ft west of the center stake.	Isolated fragments of <i>Echmatemys</i> carapace and plastron were found around the purple sandstone. Class 3a
"NBU #920-12D" (Sec. 12, T 9 S, R 20, E)	The proposed access road and well pad are staked on relatively flat ground covered almost entirely by eolian wind deposits. Although the ground is mostly covered in eolian blown sand, there was an outcrop of light brown sandstone composed of subrounded, medium grains approximately 10 feet east from the center stake.	Isolated pieces of turtle carapace and plastron belonging to <i>Echmatemys</i> and pieces of a mammalian skull with enamel shards were found scattered around the sandstone, and a partial <i>Echmatemys</i> specimen was found <i>in-situ</i> . Class 4a
"NBU #920-12E" (Sec. 12, T 9 S, R 20, E)	The proposed access road, pipeline, and well pad are staked on sloping ground that is covered by colluvium, reworked washout deposits, and large outcrops of purple sandstone composed of subrounded, medium to coarse grains.	Fossils found in the area consisted of isolated pieces of carapace and plastron belonging to <i>Echmatemys</i> and a large bone fragment (brontothere?). Class 4a
"NBU #920-12F" (Sec. 12, T 9 S, R 20, E)	The proposed access road, pipeline, and well pad are staked on relatively flat ground covered with colluvium and reworked washout deposits.	No fossils were found. Class 3a
"NBU #920-12G" (Sec. 12, T 9 S, R 20, E)	The proposed access road, pipeline, and well pad are staked on relatively flat ground covered with colluvium and reworked washout deposits.	No fossils were found. Class 3a
"NBU #920-12H" (Sec. 12, T 9 S, R 20, E)	The proposed access road, pipeline, and well pad are staked on sloping ground covered by colluvium and outcrops of purple sandstone composed of subrounded, medium grains. The purple sandstone outcrop was observed approximately 30 ft from south from the center stake, and 20 ft east of the proposed pipeline.	Fossils found in the area included isolated fragments of <i>Echmatemys</i> carapace and plastron. Class 4a

"NBU #920-12I" (Sec. 12, T 9 S, R 20, E)	The proposed access road, pipeline, and well pad are staked on sloping ground covered by colluvium and outcrops of purple sandstone composed of subrounded, medium grains that are approximately 20 ft south of the proposed pipeline and well pad.	Isolated fragments of turtle carapace and plastron belonging to <i>Echmatemys</i> were found around the sandstone and four highly weathered vertebrae possibly belonging to the suborder serpentes were found approximately 10 ft from the center stake. Class 4a
"NBU #920-12J" (Sec. 12, T 9 S, R 20, E)	The proposed access road, pipeline, and well pad are staked on sloping ground covered by colluvium and an outcrop of purple sandstone composed subrounded, medium grains. The outcrop of sandstone lies approximately 20 ft south from the proposed pipeline and well pad.	Isolated fragments of <i>Echmatemys</i> carapace and plastron were found around the sandstone. Class 3a
"NBU #920-12K" (Sec. 12, T 9 S, R 20, E)	The proposed access road, pipeline, and well pad are staked on sloping ground that is covered by colluvium and out crops of purple sandstone composed of subrounded, medium grains. The outcrop of sandstone lies approximately 20 ft south from the proposed pipeline and well pad.	Isolated fragments of <i>Echmatemys</i> carapace and plastron were found around the sandstone. Class 3a
"NBU #920-13A" (Sec. 13, T 9 S, R 20, E)	The proposed access road, pipeline, and well pad are staked on relatively flat ground covered by colluvium and purple outcrops of sandstone composed of subrounded, medium grains. The outcrops of purple sandstone were observed approximately 20 ft southeast of the central stake.	Fossils found included several fragments of <i>Echmatemys</i> that were loosely associated to each other. Class 3a
"NBU #920-13B" (Sec. 13, T 9 S, R 20, E)	The proposed access road, pipeline, and well pad are staked on relatively flat ground covered by colluvium and outcrops of purple sandstone composed of subrounded, medium grains. The outcrop of sandstone was observed approximately 20 ft west and 30 ft south from the well pad.	Fossils found in the area included isolated fragments of <i>Echmatemys</i> carapace and plastron. Class 3a
"NBU #920-13H" (Sec. 13, T 9 S, R 20, E)	The proposed access road, pipeline, and well pad are staked on flat ground that is covered by colluvium.	No fossils were found. Class 3a

RECOMMENDATIONS

A reconnaissance survey was conducted for Kerr McGee's proposed well pads, access roads, and pipelines for "NBU #920-12B, D, E, F, G, H, I, J & K; #920-13A, B & H" (Sec. 12 & 13, T 9 S, R 20 E) The well pads and the associated access roads and pipelines covered in this report showed some signs of vertebrate fossils, therefore, we advise the following recommendations

Due to the number of fossil vertebrates found, we recommend that a permitted paleontologist be present to monitor the construction of thee proposed access roads, pipelines, and well pads "NBU #920-12D, NBU #920-12E, and NBU #920-12I" (Sec. 12, T 9 S, R 20 E)

We further recommended that the remaining access roads, pipelines and well pads covered in this report have no paleontological restriction placed on them during construction. However, buried pipeline will encounter Uinta formational sediments along most of the staked pipeline corridors and care should be taken to report any vertebrate fossils which are disturbed.

Nevertheless, if any vertebrate fossil(s) are found during construction within the project area, recommendations are that a paleontologist is immediately notified in order to collect fossil materials in danger of being destroyed. Any vertebrate fossils found should be carefully moved outside of the construction areas to be check by a permitted paleontologist.

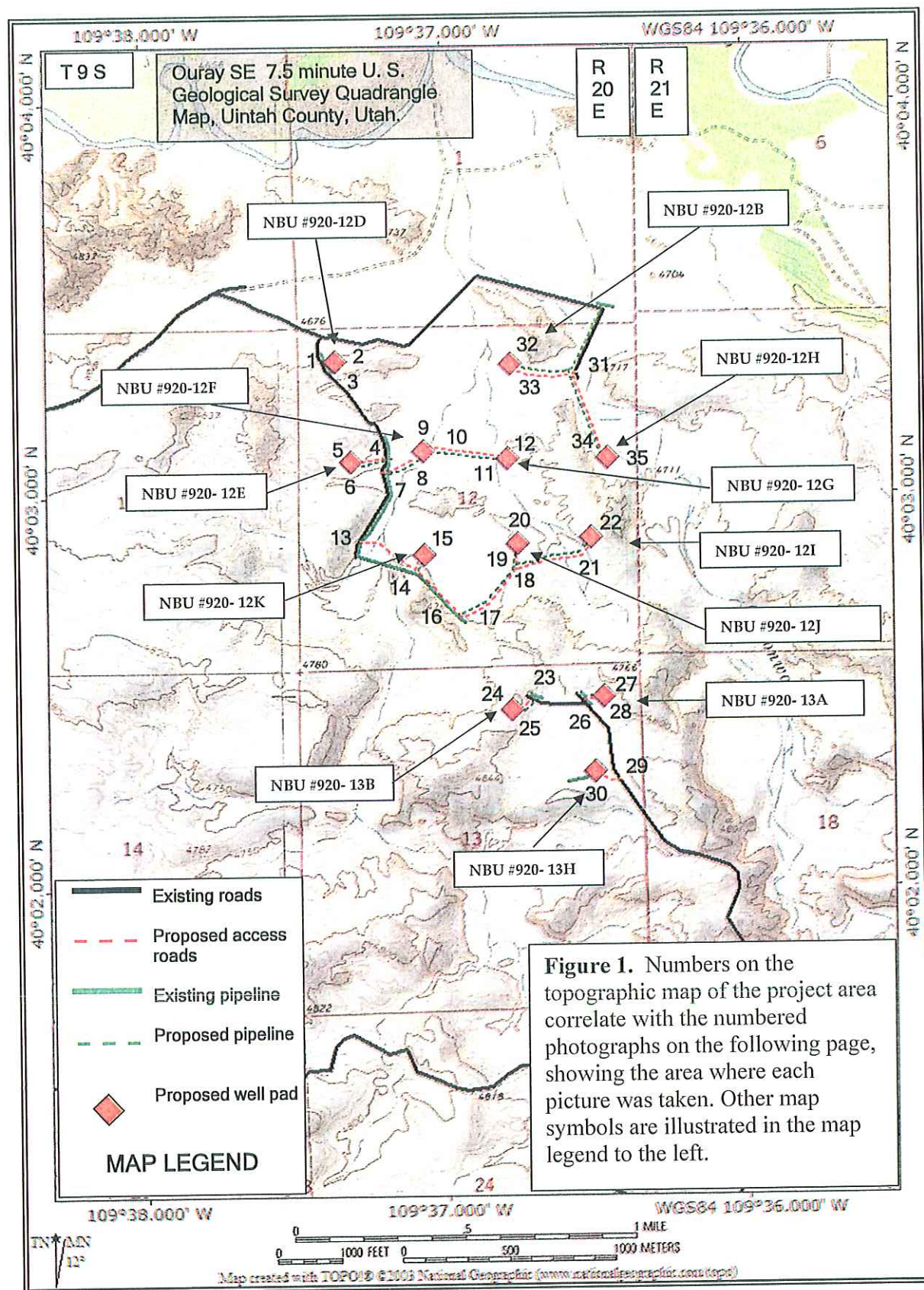


Figure 1. *continued...*

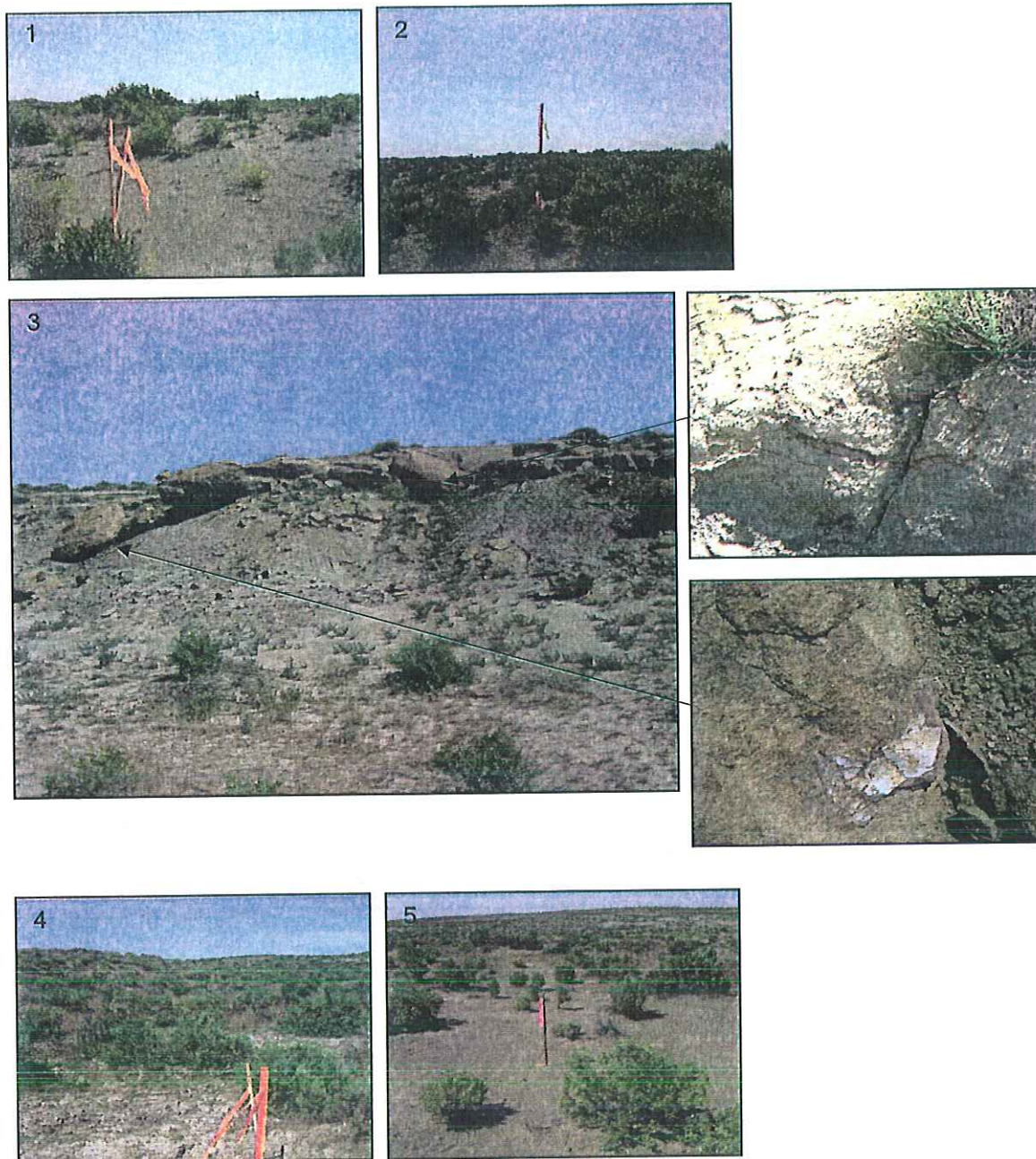


Figure 1. *continued...*

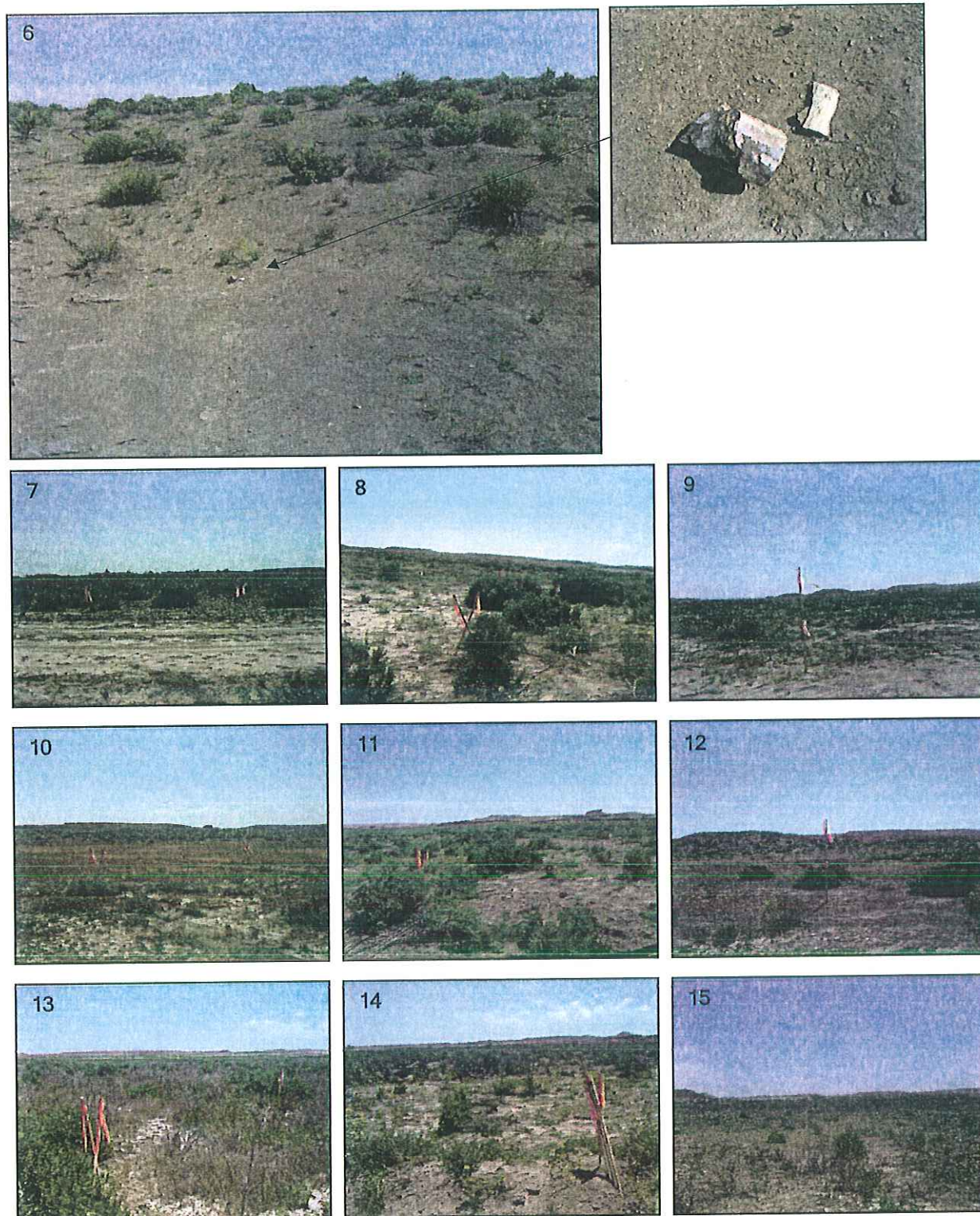


Figure 1. *continued...*

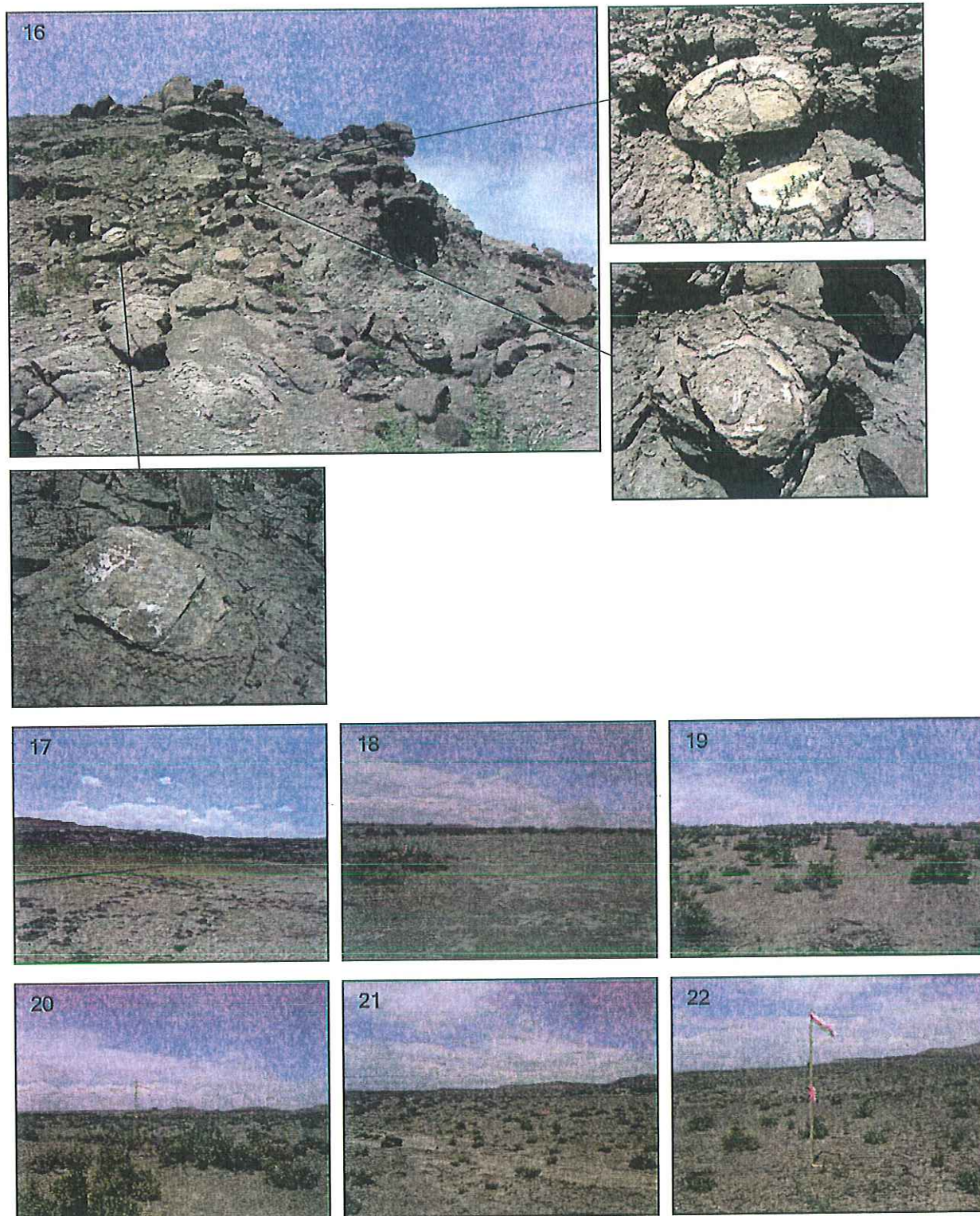


Figure 1. *continued...*

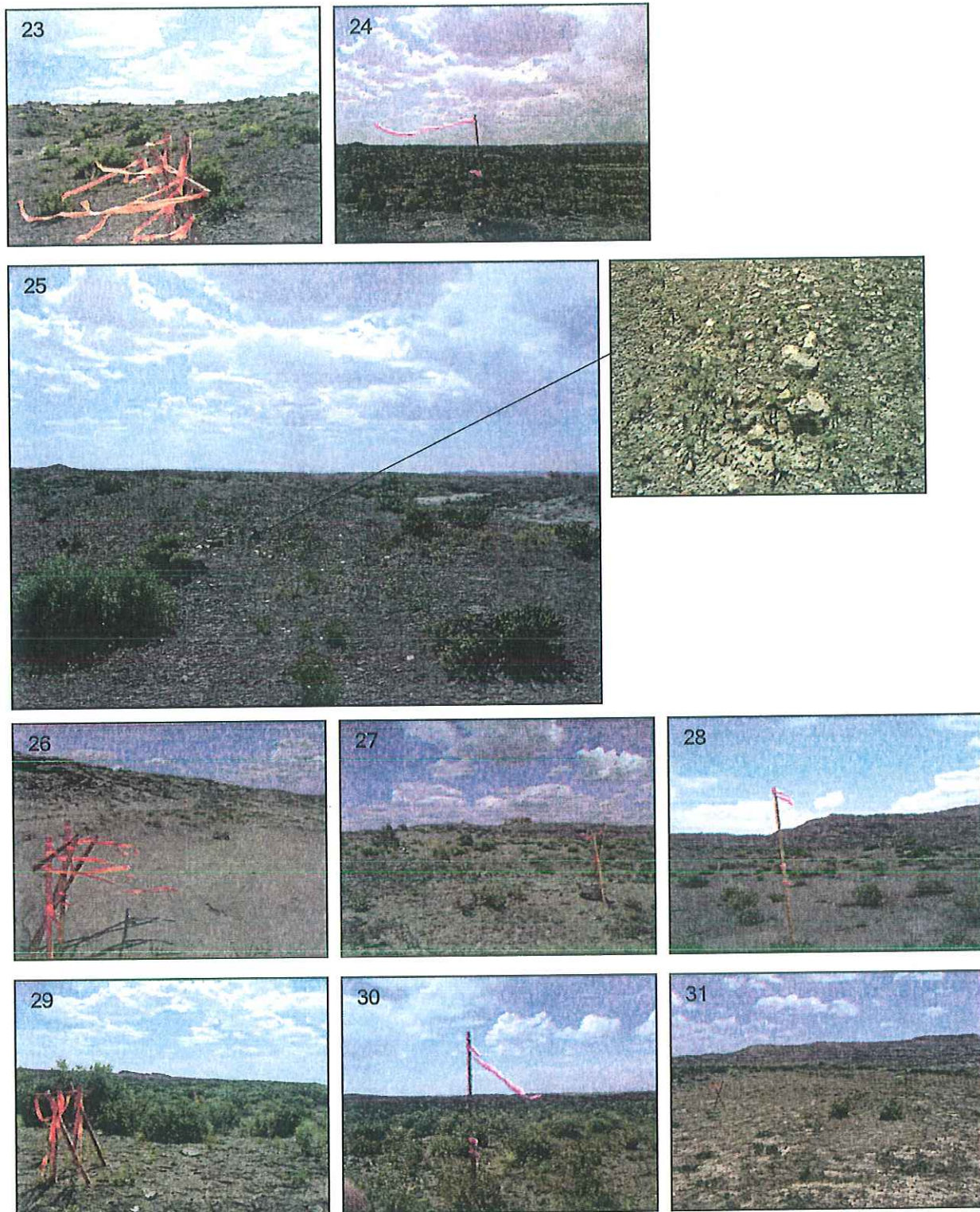
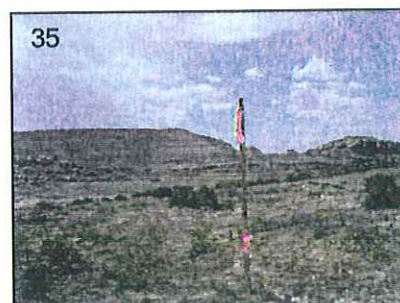


Figure 1. *continued...*



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United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office
P.O. Box 45155
Salt Lake City, Utah 84145-0155

IN REPLY REFER TO:

3160
(UT-922)

October 1, 2008

Memorandum

To: Assistant District Manager Minerals, Vernal District
From: Michael Coulthard, Petroleum Engineer
Subject: 2008 Plan of Development Natural Buttes Unit
Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2008 within the Natural Buttes Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
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(Proposed PZ WASATCH-MESA VERDE)

43-047-50157	NBU 920-13F	Sec 13 T09S R20E 1321 FNL 1950 FWL
43-047-40380	NBU 920-13D	Sec 13 T09S R20E 0186 FNL 0807 FWL
43-047-50163	NBU 920-12E	Sec 12 T09S R20E 2080 FNL 0747 FWL
43-047-50151	NBU 920-13G	Sec 13 T09S R20E 1907 FNL 1782 FEL
43-047-50160	NBU 920-12D	Sec 12 T09S R20E 0491 FNL 0857 FWL
43-047-50164	NBU 920-13A	Sec 13 T09S R20E 0625 FNL 0586 FEL
43-047-50165	NBU 1022-27C	Sec 27 T10S R22E 0922 FNL 2341 FWL

(Proposed PZ MESA VERDE)

43-047-50161	NBU 920-24AT	Sec 24 T09S R20E 0709 FNL 0704 FEL
43-047-50162	NBU 920-12LT	Sec 12 T09S R20E 1538 FSL 0792 FWL

This office has no objection to permitting the wells at this time.

/s/ Michael L. Coulthard

bcc: File - Natural Buttes Unit
Division of Oil Gas and Mining
Central Files
Agr. Sec. Chron
Fluid Chron

MCoulthard:mc:10-1-08

API Number: 4304750163

Well Name: NBU 920-12E

Township 09.0 S Range 20.0 E Section 12

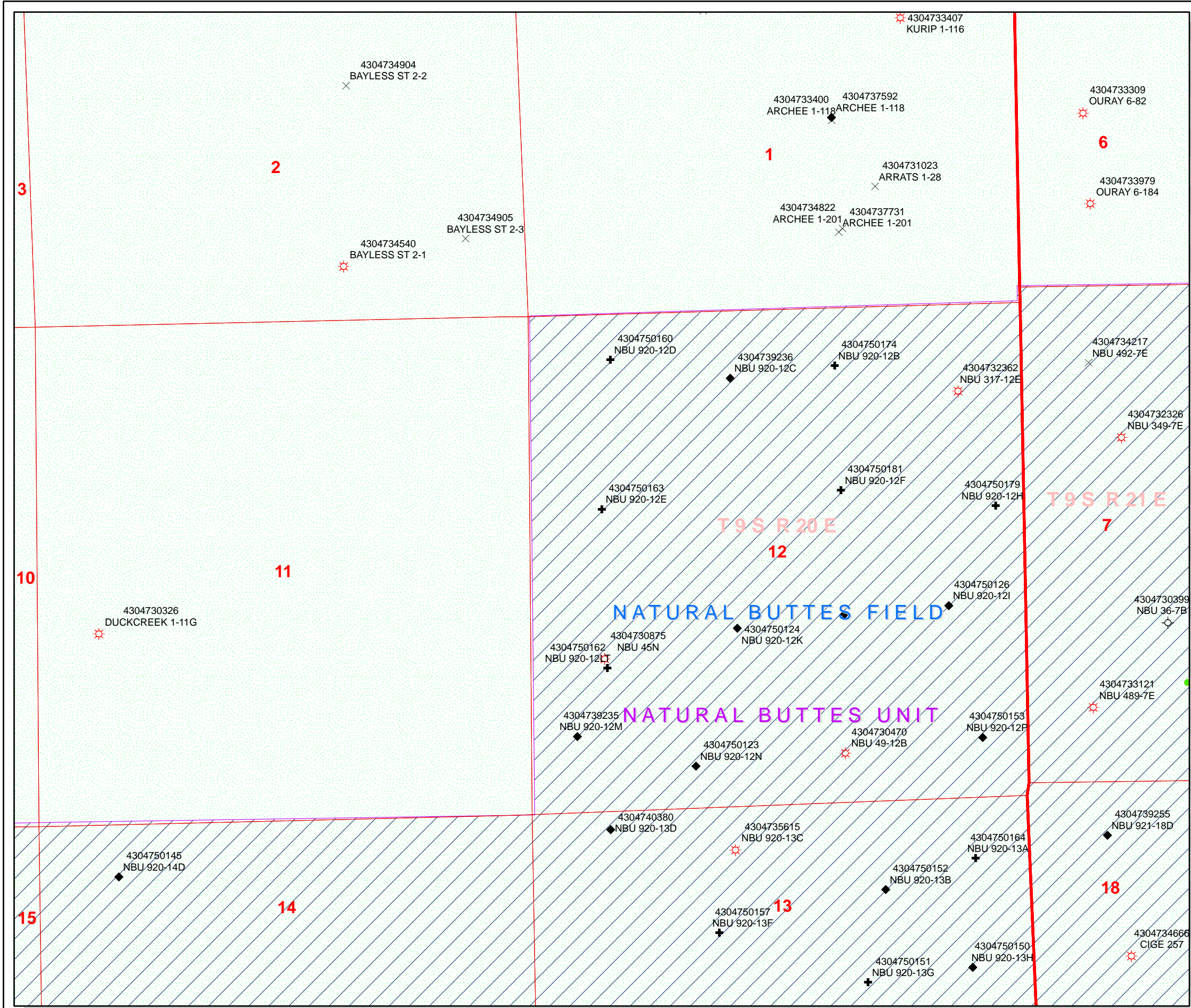
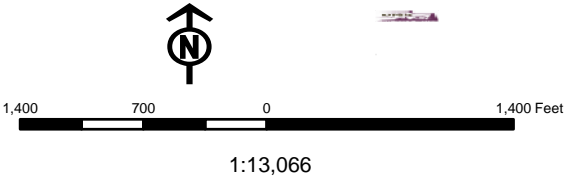
Meridian: SLBM

Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Map Prepared:
Map Produced by Diana Mason

Units
STATUS
ACTIVE
EXPLORATORY
GAS STORAGE
NF PP OIL
NF SECONDARY
PI OIL
PP GAS
PP GEOTHERML
PP OIL
SECONDARY
TERMINATED
Fields
STATUS
ACTIVE
COMBINED
Sections
Township

Wells Query Events
X <all other values>
GIS_STAT_TYPE
<Null>
APD
DRL
GI
GS
LA
NEW
OPS
PA
PGW
POW
RET
SGW
SOW
TA
TW
WD
WI
WS
Bottom Hole Location



WORKSHEET

APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 10/1/2008

API NO. ASSIGNED: 43047501630000

WELL NAME: NBU 920-12E

OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995)

PHONE NUMBER: 720 929-6226

CONTACT: Kevin McIntyre

PROPOSED LOCATION: SWNW 12 090S 200E

Permit Tech Review: ☒

SURFACE: 2080 FNL 0747 FWL

Engineering Review: ☐

BOTTOM: 2080 FNL 0747 FWL

Geology Review: ☒

COUNTY: UINTAH

LATITUDE: 40.05152

LONGITUDE: -109.62129

UTM SURF EASTINGS: 617603.00

NORTHINGS: 4434176.00

FIELD NAME: NATURAL BUTTES

LEASE TYPE: 1 - Federal

LEASE NUMBER: UTU-0144868B

PROPOSED FORMATION: WSMVD

SURFACE OWNER: 2 - Indian

COALBED METHANE: NO

RECEIVED AND/OR REVIEWED:

☒ **PLAT**

☒ **Bond:** FEDERAL - WYB000291

☐ **Potash**

☒ **Oil Shale 190-5**

☐ **Oil Shale 190-3**

☐ **Oil Shale 190-13**

☒ **Water Permit:** Permit #43-8496

☐ **RDCC Review:**

☐ **Fee Surface Agreement**

☐ **Intent to Commingle**

LOCATION AND SITING:

☐ **R649-2-3.**

Unit: NATURAL BUTTES

☐ **R649-3-2. General**

☐ **R649-3-3. Exception**

☐ **Drilling Unit**

Board Cause No: 173-14

Effective Date: 12/2/1999

Siting: 460' fr u bdry & uncomm. tract

☐ **R649-3-11. Directional Drill**

Comments: Presite Completed

Stipulations: 4 - Federal Approval - dmason
17 - Oil Shale 190-5(b) - dmason



JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

Permit To Drill

Well Name: NBU 920-12E
API Well Number: 43047501630000
Lease Number: UTU-0144868B
Surface Owner: INDIAN
Approval Date: 10/21/2008

Issued to:

KERR-MCGEE OIL & GAS ONSHORE, L.P. , P.O. Box 173779, Denver, CO 80217

Authority:

Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of 173-14.

Duration:

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

Conditions of Approval:

State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

Notification Requirements:

Notify the Division with 24 hours of spudding the well.

- Contact Carol Daniels at (801) 538-5284.

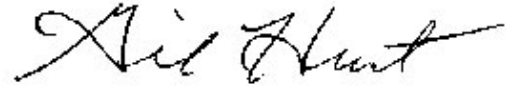
Notify the Division prior to commencing operations to plug and abandon the well.

- Contact Dustin Doucet at (801) 538-5281 office (801) 733-0983 home

Reporting Requirements:

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

Approved By:

A handwritten signature in black ink, appearing to read "Gil Hunt", with a stylized, flowing script.

Gil Hunt
Associate Director, Oil & Gas

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB No. 1004-0137
Expires July 31, 2010

5. Lease Serial No.
UTU-0144868B

6. If Indian, Allottee or Tribe Name
Ute

7. If Unit or CA Agreement, Name and No.
891008900A

8. Lease Name and Well No.
NBU 920-12E

9. API Well No.

10. Field and Pool, or Exploratory
Natural Buttes Field

11. Sec., T. R. M. or Blk. and Survey or Area
Sec. 12, T 9S, R 20E

12. County or Parish
Uintah

13. State
UT

1a. Type of work: ☒ DRILL ☐ REENTER

1b. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other ☐ Single Zone ☒ Multiple Zone

2. Name of Operator
Kerr-McGee Oil & Gas Onshore, LP

3a. Address
P.O. Box 173779, Denver, CO 80217-3779

3b. Phone No. (include area code)
720.929.6226

4. Location of Well (Report location clearly and in accordance with any State requirements.)*
At surface SWNW 2080' FNL & 747' FWL LAT 40.05159 LON -109.62134 (NAD 27)
At proposed prod. zone N/A

14. Distance in miles and direction from nearest town or post office*
7.1 miles southeast of Ouray, Utah

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)
747'

16. No. of acres in lease
600

17. Spacing Unit dedicated to this well
Unit Well

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
1500'

19. Proposed Depth
10,700'

20. BLM/BIA Bond No. on file
WYB000291

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
4718.9' GL

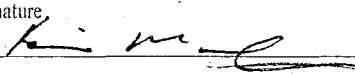
22. Approximate date work will start*

23. Estimated duration
10 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, must be attached to this form:

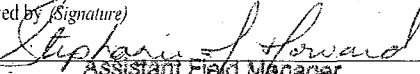
- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification
- Such other site specific information and/or plans as may be required by the BLM.

25. Signature


Name (Printed/Typed)
Kevin McIntyre

Date
09/29/2008

Title
Regulatory Analyst I.

Approved by (Signature)

Title
Assistant Field Manager
District Lands & Mineral Resources

Name (Printed/Typed)
Stephanie J Howard
Office
VERNAL FIELD OFFICE

Date
9/1/09

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 2)

DEPT OF THE INTERIOR
BUREAU OF LAND MGMT
2008 OCT 1 AM 11 52
VERNAL FIELD OFFICE
RECEIVED

*(Instructions on page 2)
RECEIVED
SEP 15 2009

DIV. OF OIL, GAS & MINING

4006M
NOTICE OF APPROVAL

CONDITIONS OF APPROVAL ATTACHED



UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VERNAL FIELD OFFICE

170 South 500 East

VERNAL, UT 84078

(435) 781-4401



CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company:	Kerr McGee Oil & Gas Onshore LP	Location:	SWNW, Sec. 12, T9S R20E
Well No:	NBU 920-12E	Lease No:	UTU-0144868-B
API No:	43-047-50163	Agreement:	Natural Buttes Unit

OFFICE NUMBER: (435) 781-4400

OFFICE FAX NUMBER: (435) 781-3420

**A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR
FIELD REPRESENTATIVE TO INSURE COMPLIANCE**

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. **This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.**

NOTIFICATION REQUIREMENTS

Location Construction (Notify Environmental Scientist)	-	Forty-Eight (48) hours prior to construction of location and access roads.
Location Completion (Notify Environmental Scientist)	-	Prior to moving on the drilling rig.
Spud Notice (Notify Petroleum Engineer)	-	Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to running casing and cementing all casing strings to: <u>ut_vn_opreport@blm.gov</u> .
BOP & Related Equipment Tests (Notify Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify Petroleum Engineer)	-	Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

**SURFACE USE PROGRAM
CONDITIONS OF APPROVAL (COAs)**

- All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horsepower must not emit more than 2 gms of NO_x per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.
- All and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gms of NO_x per horsepower-hour.
- If there is an active Gilsonite mining operation within 2 miles of the well location, operator shall notify the Gilsonite operator at least 48 hours prior to any blasting during construction.
- If paleontological materials are uncovered during construction, the operator is to immediately stop work and contact the Authorized Officer (AO). A determination will be made by the AO as to what mitigation may be necessary for the discovered paleontologic material before construction can continue.

SITE SPECIFIC CONDITIONS OF APPROVAL

- Paint facilities "shadow gray."
- Monitoring by a permitted paleontologist during the construction process.
- Avoid archaeological site. Monitor location by a permitted archaeologist during the construction process.
- Utilize pit-run/gravel for well pad and access road support.
- Upgrade the low-water crossing on existing road between the 12E and the 12D wells to allow proper drainage of standing water. Use pit-run/gravel at the low water crossing.
- If project construction operations are scheduled to occur after December 31, 2009, KMG will conduct additional raptor surveys in accordance with the guidelines specified in the Utah Field Office Guidelines for Raptor Protection for Human and Land Use Disturbances, 2002 and conduct its operations according to applicable seasonal restrictions and spatial offsets.
- If project construction operation are scheduled to occur after April 20, 2010, KMG will conduct additional biological surveys in accordance with the guidelines specified in the USFWS Rare Plant Conservation Measures for Uinta Basin hookless cactus and conduct its operation according to its specifications.

General Conditions of Approval:

- A 30' foot corridor right-of-way shall be approved. Upon completion of each pipeline in corridor, they shall be identified and filed with the Ute Tribe.
- A qualified Archaeologist accompanied by a Tribal Technician will monitor trenching construction of pipeline.
- The Ute Tribe Energy & Minerals Department is to be notified, in writing 48 hours prior to construction of pipeline.

- Construction Notice shall be given to the department on the Ute Tribe workdays, which are Monday through Thursday. The Company understands that they may be responsible for costs incurred by the Ute Tribe after hours.
- The Company shall inform contractors to maintain construction of pipelines within the approved ROW's.
- The Company shall assure the Ute Tribe that "ALL CONTRACTORS, INCLUDING SUB-CONTRACTORS, LEASING CONTRACTORS, AND ETC." have acquired a current and valid Ute Tribal Business License and have "Access Permits" prior to construction, and will have these permits in all vehicles at all times.
- You are hereby notified that working under the "umbrella" of a company does not allow you to be in the field, and can be subject to those fines of the Ute Tribe Severance Tax Ordinance.
- Any deviation of submitted APD's and ROW applications the Companies will notify the Ute Tribe and BIA in writing and will receive written authorization of any such change with appropriate authorization.
- The Company will implement "Safety and Emergency Plan." The Company's safety director will ensure its compliance.
- All Company employees and/or authorized personnel (sub-contractors) in the field will have approved applicable APD's and/or ROW permits/authorizations on their person(s) during all phases of construction.
- All vehicular traffic, personnel movement, construction/restoration operations should be confined to the area examined and approved, and to the existing roadways and/or evaluated access routes.
- All personnel should refrain from collecting artifacts, any paleontological fossils, and from disturbing any significant cultural resources in the area.
- The personnel from the Ute Tribe Energy & Minerals Department should be notified should cultural remains from subsurface deposits be exposed or identified during construction. All construction will cease.
- All mitigative stipulations contained in the Bureau of Indian Affairs Site Specific Environmental Assessment (EA) will be strictly adhered.
- Upon completion of Application for Corridor Right-Way, the company will notify the Ute Tribe Energy & Minerals Department, so that a Tribal Technician can verify Affidavit of Completion.

**DOWNHOLE PROGRAM
CONDITIONS OF APPROVAL (COAs)**

SITE SPECIFIC DOWNHOLE COAs:

- Kerr McGee and their contractors shall strictly adhere to all operating practices in the SOP along with all Oil and Gas rules and requirements listed in the Code of Federal Regulations and all Federal Onshore Oil and Gas Orders except where variances have been granted.

All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to. The following items are emphasized:

DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a test pump with a chart recorder and **NOT** by the rig pumps. Test shall be reported in the driller's log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- **Cement baskets shall not be run on surface casing.**
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal Field Office.
- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.

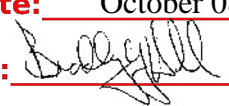
- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- **Please submit an electronic copy of all other logs run on this well in LAS format to UT_VN_Welllogs@BLM.gov. This submission will supersede the requirement for submittal of paper logs to the BLM.**
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

OPERATING REQUIREMENT REMINDERS:

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.
- In accordance with 43 CFR 3162.4-3, this well shall be reported on the "Monthly Report of Operations" (Oil and Gas Operations Report ((OGOR)) starting with the month in which operations commence and continue each month until the well is physically plugged and abandoned. This report shall be filed in duplicate, directly with the Minerals Management Service, P.O. Box 17110, Denver, Colorado 80217-0110, or call 1-800-525-7922 (303) 231-3650 for reporting information.
- Should the well be successfully completed for production, the BLM Vernal Field office must be notified when it is placed in a producing status. Such notification will be by written communication and must be received in this office by not later than the fifth business day following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:
 - Operator name, address, and telephone number.
 - Well name and number.
 - Well location (¼¼, Sec., Twn, Rng, and P.M.).
 - Date well was placed in a producing status (date of first production for which royalty will be paid).
 - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
 - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
 - Unit agreement and/or participating area name and number, if applicable.
 - Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4.

Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office Petroleum Engineers will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports shall be submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover equipment shall be removed from a well to be placed in a suspended status without prior approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior approval of the BLM Vernal Field Office shall be obtained and notification given before resumption of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9			
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-0144868B			
1. TYPE OF WELL Gas Well		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute			
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES			
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		8. WELL NAME and NUMBER: NBU 920-12E			
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2080 FNL 0747 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWNW Section: 12 Township: 09.0S Range: 20.0E Meridian: S		9. API NUMBER: 43047501630000			
PHONE NUMBER: 720 929-6007 Ext		9. FIELD and POOL or WILDCAT: NATURAL BUTTES			
COUNTY: UTAH		STATE: UTAH			
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA					
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12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.					
Approved by the Utah Division of Oil, Gas and Mining		Date: <u>October 08, 2009</u> By: 			
NAME (PLEASE PRINT) Danielle Piernot		PHONE NUMBER 720 929-6156			
TITLE Regulatory Analyst		DATE 10/6/2009			
SIGNATURE N/A		DATE 10/6/2009			



The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43047501630000

API: 43047501630000

Well Name: NBU 920-12E

Location: 2080 FNL 0747 FWL QTR SWNW SEC 12 TWNP 090S RNG 200E MER S

Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Date Original Permit Issued: 10/21/2008

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- If located on private land, has the ownership changed, if so, has the surface agreement been updated? ☐ Yes ☒ No
- Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? ☐ Yes ☒ No
- Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? ☐ Yes ☒ No
- Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location? ☐ Yes ☒ No
- Has the approved source of water for drilling changed? ☐ Yes ☒ No
- Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? ☐ Yes ☒ No
- Is bonding still in place, which covers this proposed well? ☒ Yes ☐ No

**Approved by the
Utah Division of
Oil, Gas and Mining**

Signature: Danielle Piernot

Date: 10/6/2009

Title: Regulatory Analyst **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

Date: October 08, 2009

By:

RECEIVED October 06, 2009

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9			
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12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests to change the surface casing size for this well. The surface casing size is changing FROM: 9-5/8" TO: 8-5/8". Please see the attached drilling diagram for additional details. All other information remains the same. If you have any questions, please contact the undersigned. Thank you.					
Accepted by the Utah Division of Oil, Gas and Mining		Date: <u>November 16, 2009</u> By: <u>Dan K. Quist</u>			
NAME (PLEASE PRINT) Danielle Piernot	PHONE NUMBER 720 929-6156	TITLE Regulatory Analyst			
SIGNATURE N/A	DATE 11/9/2009				

KERR-McGEE OIL & GAS ONSHORE LP
DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP	DATE	November 9, 2009
WELL NAME	NBU 920-12E	TD	10,850' MD/TVD
FIELD	Natural Buttes	COUNTY	Uintah
		STATE	Utah
		FINISHED ELEVATION	4,716'
SURFACE LOCATION	SW/4 NW/4 2,080' FNL 747' FwL	Sec 12 T 9S R 20E	BHL Straight Hole
	Latitude: 40.051550	Longitude: 109.622030	NAD 83
OBJECTIVE ZONE(S)	Wasatch/Mesaverde		
ADDITIONAL INFO	Regulatory Agencies: BLM (MINERALS), Ute Tribe (SURFACE), UDOGM, Tri-County Health Dept.		

GEOLOGICAL			MECHANICAL		
LOGS	FORMATION TOPS	DEPTH	HOLE SIZE	CASING SIZE	MUD WEIGHT
		40'		14"	
			12-1/4"	8-5/8", 28#, J-55, LTC	Air mist
All water flows encountered while drilling will be reported to the appropriate agencies.					
	Green River @	1,857'			
	Top of Birds Nest Water @	2,112'			
	Mahogany @	2,638'			
	Preset f/ GL @				
	2,840' MD				
Note: 12.25" surface hole will usually be drilled ±400' below the bottom of lost circulation zone. Drilled depth may be ±200' of the estimated set depth depending on the actual depth of the loss zone.					
Mud logging program TBD Open hole logging program from TD - surf csg			7-7/8"	4-1/2" 11.6# HCP-110 & I-80 or equivalent BTC/LTC casing	Water/Fresh Water Mud 8.3-12.2 ppg
	Wasatch @	5,319'			
	Mverde @	8,599'			
	MVU2 @	9,573'			
	MVL1 @	10,086'			
	TD @	10,850'			Max anticipated Mud required 12.2 ppg



KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS		
						BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'				3,930	2,530	417,000
SURFACE	8-5/8"	0 to 2840	28.00	J-55	LTC	0.87*	1.90	5.24
						7,780	6,350	278,000
PRODUCTION	4-1/2"	0 to 9600	11.60	I-80	BTC	1.73	1.04	2.71
						10,690	8,650	279,000
		9600 to 10850	11.60	HCP-110	LTC	2.38	1.26	23.65

*Burst on surface casing is controlled by fracture gradient as shoe with gas gradient above.

D.F. = 2.20

- 1) Max Anticipated Surf. Press. (MASP) (Surf Csg) = (Pore Pressure at next csg point - (0.22 psi/ft-partial evac grad x TVD of next csg point))
(Burst Assumptions: TD = 12.2 ppg) 0.22 psi/ft = gradient for partially evac wellbore
(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)
MASP 4,373 psi
- 2) MASP (Prod Casing) = Pore Pressure at TD - (0.22 psi/ft-partial evac gradient x TD)
(Burst Assumptions: TD = 12.2 ppg) 0.62 psi/ft = bottomhole gradient
(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)
MABHP 6,760 psi
- 3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD
(Burst Assumptions: TD = 12.2 ppg) 0.62 psi/ft = bottomhole gradient
(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)
MABHP 6,760 psi

CEMENT PROGRAM

	FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE LEAD	500'	Premium cmt + 2% CaCl	215	60%	15.60	1.18
Option 1		+ 0.25 pps flocele				
TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	380	0%	15.60	1.18
		+ 2% CaCl + 0.25 pps flocele				
		Premium cmt + 2% CaCl				
SURFACE Option 2	NOTE: If well will circulate water to surface, option 2 will be utilized					
LEAD	2,340'	Prem cmt + 16% Gel + 10 pps gilsonite	350	35%	11.00	3.82
		+ 0.25 pps Flocele + 3% salt BWOC				
TAIL	500	Premium cmt + 2% CaCl	240	35%	15.60	1.18
		+ 0.25 pps flocele				
TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
PRODUCTION LEAD	4,810'	Premium Lite II + 0.25 pps celloflake +	460	40%	11.00	3.38
		5 pps gilsonite + 10% gel ' + 1% Retarder				
TAIL	6,040'	50/50 Poz/G + 10% salt + 2% gel	1480	40%	14.30	1.31
		+ 0.1% R-3				

*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe.
PRODUCTION	Float shoe, 1 jt, float collar. Centralize first 3 joints & every third joint for a total of 15 bow spring centralizers.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Drop Totco surveys every 2000'. Maximum allowable hole angle is 5 degrees.

Most rigs have PVT Systems for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER:

John Huycke / Emile Goodwin

DATE:

DRILLING SUPERINTENDENT:

John Merkel / Lovel Young

DATE:

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

Name of Company: KERR-McGEE OIL & GAS ONSHORE, L.P.

Well Name: NBU 920-12E

Api No: 43-047-50163 Lease Type: FEDERAL

Section 12 Township 09S Range 20E County UINTAH

Drilling Contractor PETE MARTIN DRLG RIG # BUCKET

SPUDDED:

Date 11/10/2009

Time 11:15 AM

How DRY

Drilling will Commence: _____

Reported by JAMES GOBEL

Telephone # (435) 828-7024

Date 11/10/2009 Signed CHD

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 6

ENTITY ACTION FORM

Operator: KERR McGEE OIL & GAS ONSHORE LP Operator Account Number: N 2995
Address: P.O. Box 173779
city DENVER
state CO zip 80217 Phone Number: (720) 929-6100

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304750163	NBU 920-12E		SWNW	12	9S	20E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
B	99999	2900	11/10/2009		11/10/09		
Comments: MIRU PETE MARTIN BUCKET RIG. <u>WSMVB</u> SPUD WELL LOCATION ON 11/10/2009 AT 11:15 HRS.							

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
Comments:							

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
Comments:							

ACTION CODES:

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

RECEIVED

NOV 12 2009

ANDY LYTLE

Name (Please Print)

Signature

REGULATORY ANALYST

Title

11/11/2009

Date

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9			
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-0144868B			
1. TYPE OF WELL Gas Well		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute			
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES			
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		8. WELL NAME and NUMBER: NBU 920-12E			
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2080 FNL 0747 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWNW Section: 12 Township: 09.0S Range: 20.0E Meridian: S		9. API NUMBER: 43047501630000			
PHONE NUMBER: 720 929-6007 Ext		9. FIELD and POOL or WILDCAT: NATURAL BUTTES			
COUNTY: UTAH		STATE: UTAH			
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA					
TYPE OF SUBMISSION	TYPE OF ACTION				
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 11/19/2009 <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <input type="checkbox"/> SPUD REPORT Date of Spud: <input type="checkbox"/> DRILLING REPORT Report Date:	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> ACIDIZE <input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION </td> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER </td> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: </td> </tr> </table>		<input type="checkbox"/> ACIDIZE <input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER:
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12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests to change the size of the hole that will be drilled for this well. The hole size is changing FROM: 12-1/4" TO: 11". Please see the attached drilling program for additional details. If you have any questions, please contact the undersigned. Thank you.					
Accepted by the Utah Division of Oil, Gas and Mining		Date: <u>November 18, 2009</u> By: <u>Dan K. Quist</u>			
NAME (PLEASE PRINT) Danielle Piernot		PHONE NUMBER 720 929-6156			
TITLE Regulatory Analyst		DATE 11/17/2009			
SIGNATURE N/A		DATE 11/17/2009			

KERR-McGEE OIL & GAS ONSHORE LP
DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP	DATE	November 17, 2009
WELL NAME	NBU 920-12E	TD	10,850' MD/TVD
FIELD	Natural Buttes	COUNTY	Uintah
		STATE	Utah
		FINISHED ELEVATION	4,716'
SURFACE LOCATION	SW/4 NW/4 2,080' FNL 747' FwL	Sec 12 T 9S R 20E	BHL Straight Hole
	Latitude: 40.051550	Longitude: 109.622030	NAD 83
OBJECTIVE ZONE(S)	Wasatch/Mesaverde		
ADDITIONAL INFO	Regulatory Agencies: BLM (MINERALS), Ute Tribe (SURFACE), UDOGM, Tri-County Health Dept.		

GEOLOGICAL			MECHANICAL		
LOGS	FORMATION TOPS	DEPTH	HOLE SIZE	CASING SIZE	MUD WEIGHT
		40'		14"	
			11"	8-5/8", 28#, J-55, LTC	Air mist
All water flows encountered while drilling will be reported to the appropriate agencies.					
	Green River @	1,857'			
	Top of Birds Nest Water @	2,112'			
	Mahogany @	2,638'			
	Preset f/ GL @				
	2,840' MD				
Note: 12.25" surface hole will usually be drilled ±400' below the bottom of lost circulation zone. Drilled depth may be ±200' of the estimated set depth depending on the actual depth of the loss zone.					
Mud logging program TBD Open hole logging program from TD - surf csg					
	Wasatch @	5,319'	7-7/8"	4-1/2" 11.6# HCP-110 & I-80 or equivalent BTC/LTC casing	Water/Fresh Water Mud 8.3-12.2 ppg
	Mverde @	8,599'			
	MVU2 @	9,573'			
	MVL1 @	10,086'			
	TD @	10,850'			Max anticipated Mud required 12.2 ppg



KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS		
						BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'				3,390	1,880	437,000
SURFACE	8-5/8"	0 to 2840	28.00	J-55	LTC	0.75*	1.41	5.50
						7,780	6,350	278,000
PRODUCTION	4-1/2"	0 to 9600	11.60	I-80	BTC	1.73	1.04	2.71
						10,690	8,650	279,000
		9600 to 10850	11.60	HCP-110	LTC	2.38	1.26	23.65

*Burst on surface casing is controlled by fracture gradient as shoe with gas gradient above.

D.F. = 1.89

- 1) Max Anticipated Surf. Press. (MASP) (Surf Csg) = (Pore Pressure at next csg point - (0.22 psi/ft-partial evac grad x TVD of next csg point))
(Burst Assumptions: TD = 12.2 ppg) 0.22 psi/ft = gradient for partially evac wellbore
(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)
MASP 4,373 psi
- 2) MASP (Prod Casing) = Pore Pressure at TD - (0.22 psi/ft-partial evac gradient x TD)
(Burst Assumptions: TD = 12.2 ppg) 0.62 psi/ft = bottomhole gradient
(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)
MABHP 6,760 psi
- 3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD
(Burst Assumptions: TD = 12.2 ppg) 0.62 psi/ft = bottomhole gradient
(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)
MABHP 6,760 psi

CEMENT PROGRAM

	FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD 500'	Premium cmt + 2% CaCl	215	60%	15.60	1.18
Option 1		+ 0.25 pps flocele				
TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	260	0%	15.60	1.18
		+ 2% CaCl + 0.25 pps flocele				
		Premium cmt + 2% CaCl				
SURFACE	NOTE: If well will circulate water to surface, option 2 will be utilized					
Option 2	LEAD 2,340'	Prem cmt + 16% Gel + 10 pps gilsonite	220	35%	11.00	3.82
		+ 0.25 pps Flocele + 3% salt BWOC				
	TAIL 500	Premium cmt + 2% CaCl	150	35%	15.60	1.18
		+ 0.25 pps flocele				
TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
PRODUCTION	LEAD 4,810'	Premium Lite II + 0.25 pps celloflake +	390	40%	11.00	3.38
		5 pps gilsonite + 10% gel ' + 1% Retarder				
	TAIL 6,040'	50/50 Poz/G + 10% salt + 2% gel	1,480	40%	14.30	1.31
		+ 0.1% R-3				

*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe.
PRODUCTION	Float shoe, 1 jt, float collar. Centralize first 3 joints & every third joint for a total of 15 bow spring centralizers.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Drop Totco surveys every 2000'. Maximum allowable hole angle is 5 degrees.

Most rigs have PVT Systems for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER:

John Huycke / Emile Goodwin

DATE:

DRILLING SUPERINTENDENT:

John Merkel / Lovel Young

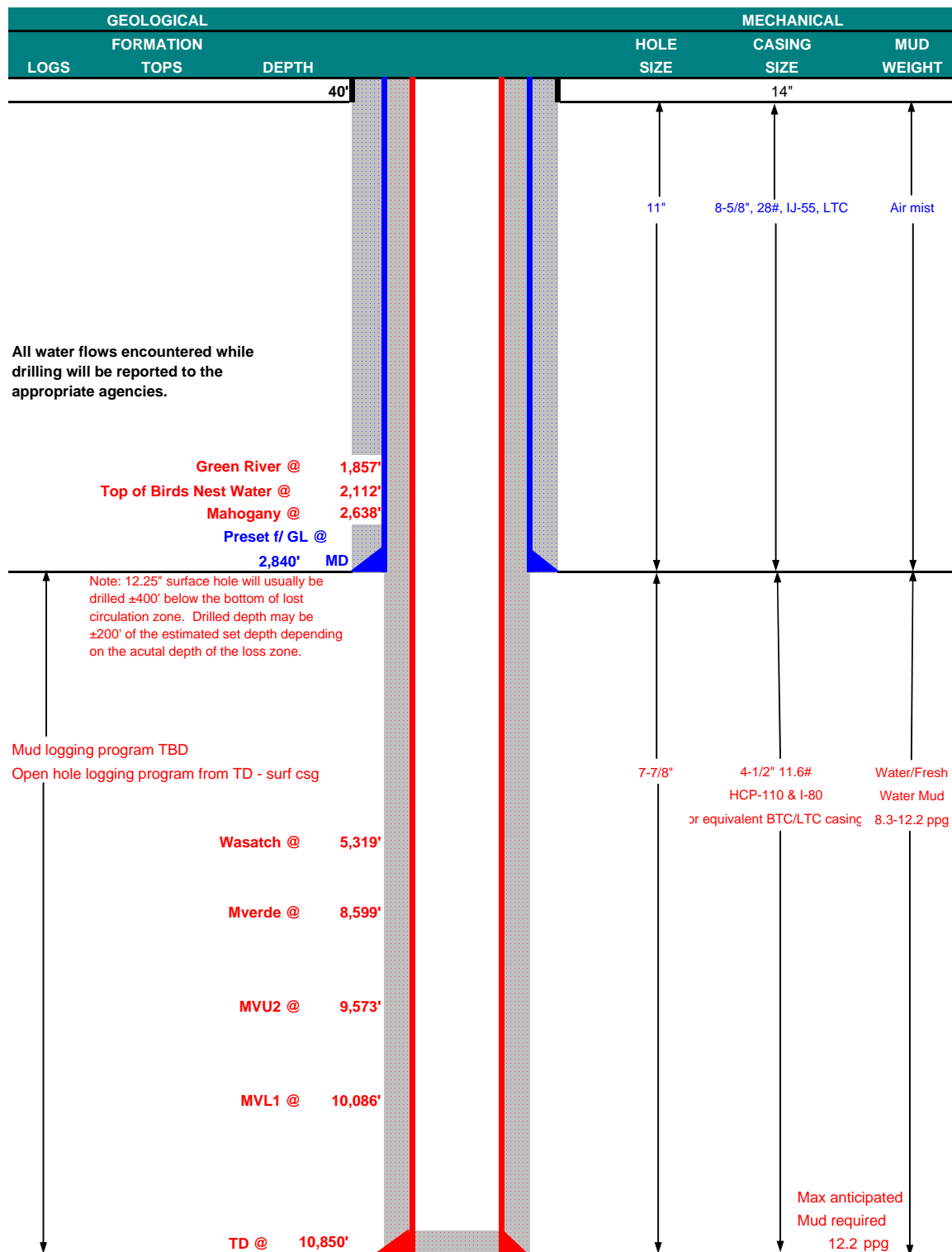
DATE:

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-0144868B
1. TYPE OF WELL Gas Well		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		8. WELL NAME and NUMBER: NBU 920-12E
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2080 FNL 0747 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWNW Section: 12 Township: 09.0S Range: 20.0E Meridian: S		9. API NUMBER: 43047501630000
PHONE NUMBER: 720 929-6007 Ext		9. FIELD and POOL or WILDCAT: NATURAL BUTTES
COUNTY: UTAH		STATE: UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
TYPE OF SUBMISSION	TYPE OF ACTION	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 11/18/2009	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> OPERATOR CHANGE	
	<input type="checkbox"/> PRODUCTION START OR RESUME	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> ALTER CASING	
	<input type="checkbox"/> CHANGE TUBING	
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	
	<input type="checkbox"/> FRACTURE TREAT	
	<input type="checkbox"/> PLUG AND ABANDON	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<input type="checkbox"/> OTHER	
	<input type="checkbox"/> CASING REPAIR	
	<input type="checkbox"/> CHANGE WELL NAME	
	<input type="checkbox"/> CONVERT WELL TYPE	
	<input type="checkbox"/> NEW CONSTRUCTION	
	<input type="checkbox"/> PLUG BACK	
	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION	
	<input type="checkbox"/> TEMPORARY ABANDON	
	<input type="checkbox"/> WATER DISPOSAL	
	<input type="checkbox"/> APD EXTENSION	
	OTHER:	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. MIRU PROPETRO AIR RIG ON 11/16/2009. DRILLED 11" SURFACE HOLE TO 2780'. RAN 8-5/8" 28# J-55 SURFACE CSG. PUMP 20 BBLS GEL WATER. CM W/220 SX CLASS G HI FILL LEAD CMT @ 11.0 PPG, 3.82 YIELD. TAILED CM W/175 SX CLASS G PREM LITE @ 15.8 PPG, 1.15 YIELD. DROP PLUG ON F & DISPLACE W/166 BBLS 8.3# H2O. 10 BBLS OF LEAD CMT TO SURFACE W/620 PSI OF LIFT @ 5 BBLS/MIN. LAND PLUG 1000 PSI & CHECK FLOAT. FLOAT HELD. PUMP 135 SX CLASS G PREM LITE TOP OUT @ 15.8 PPG, 1.15 YIELD DOWN 1". CMT TO SURFACE AND STAYED. WORT.		
<div style="text-align: right;"> Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY November 19, 2009 </div>		
NAME (PLEASE PRINT) Andy Lytle	PHONE NUMBER 720 929-6100	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 11/19/2009	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9			
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COUNTY: UTAH		STATE: UTAH			
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TYPE OF SUBMISSION	TYPE OF ACTION				
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12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests to change the grade of surface drilling pipe for this well. The surface pipe grade is changing FROM: J-55 LT&C TO: IJ-55 LT&C. Please see the attached drilling program for additional details. If you have any questions, please contact the undersigned. Thank you.					
Accepted by the Utah Division of Oil, Gas and Mining		Date: <u>November 25, 2009</u> By: <u>Dan K. Quist</u>			
NAME (PLEASE PRINT) Danielle Piernot		PHONE NUMBER 720 929-6156			
SIGNATURE N/A		TITLE Regulatory Analyst			
DATE 11/24/2009					



COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP	DATE	November 24, 2009
WELL NAME	NBU 920-12E	TD	10,850' MD/TVD
FIELD	Natural Buttes	COUNTY	Uintah
		STATE	Utah
		FINISHED ELEVATION	4,716'
SURFACE LOCATION	SW/4 NW/4 2,080' FNL 747' FwL	Sec 12 T 9S R 20E	BHL Straight Hole
	Latitude: 40.051550	Longitude: 109.622030	NAD 83
OBJECTIVE ZONE(S)	Wasatch/Mesaverde		
ADDITIONAL INFO	Regulatory Agencies: BLM (MINERALS), Ute Tribe (SURFACE), UDOGM, Tri-County Health Dept.		





KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS		
						BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'				3,390	1,880	348,000
SURFACE	8-5/8"	0 to 2840	28.00	IJ-55	LTC	0.75*	1.41	4.38
						7,780	6,350	278,000
PRODUCTION	4-1/2"	0 to 9600	11.60	I-80	BTC	1.73	1.04	2.71
						10,690	8,650	279,000
		9600 to 10850	11.60	HCP-110	LTC	2.38	1.26	23.65

*Burst on surface casing is controlled by fracture gradient as shoe with gas gradient above.

D.F. = 1.89

- 1) Max Anticipated Surf. Press. (MASP) (Surf Csg) = (Pore Pressure at next csg point - (0.22 psi/ft-partial evac grad x TVD of next csg point))
(Burst Assumptions: TD = 12.2 ppg) 0.22 psi/ft = gradient for partially evac wellbore
(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)
MASP 4,373 psi
- 2) MASP (Prod Casing) = Pore Pressure at TD - (0.22 psi/ft-partial evac gradient x TD)
(Burst Assumptions: TD = 12.2 ppg) 0.62 psi/ft = bottomhole gradient
(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)
MABHP 6,760 psi
- 3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD
(Burst Assumptions: TD = 12.2 ppg) 0.62 psi/ft = bottomhole gradient
(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)
MABHP 6,760 psi

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	215	60%	15.60	1.18
Option 1			+ 0.25 pps flocele				
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	310	0%	15.60	1.18
			+ 2% CaCl + 0.25 pps flocele				
			Premium cmt + 2% CaCl				
SURFACE		NOTE: If well will circulate water to surface, option 2 will be utilized					
Option 2	LEAD	2,340'	Prem cmt + 16% Gel + 10 pps gilsonite	220	35%	11.00	3.82
			+ 0.25 pps Flocele + 3% salt BWOC				
	TAIL	500	Premium cmt + 2% CaCl	150	35%	15.60	1.18
			+ 0.25 pps flocele				
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
PRODUCTION	LEAD	4,810'	Premium Lite II + 0.25 pps celloflake +	390	40%	11.00	3.38
			5 pps gilsonite + 10% gel ' + 1% Retarder				
	TAIL	6,040'	50/50 Poz/G + 10% salt + 2% gel	1,480	40%	14.30	1.31
			+ 0.1% R-3				

*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe.
PRODUCTION	Float shoe, 1 jt, float collar. Centralize first 3 joints & every third joint for a total of 15 bow spring centralizers.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Drop Totco surveys every 2000'. Maximum allowable hole angle is 5 degrees.

Most rigs have PVT Systems for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER:

John Huycke / Emile Goodwin

DATE:

DRILLING SUPERINTENDENT:

John Merkel / Lovel Young

DATE:

SUBMIT AS EMAIL

Print Form

BLM - Vernal Field Office - Notification Form

Operator ANADARKO Rig Name/# PIONEER 69
Submitted By DALTON KING Phone Number 435-828-0982
Well Name/Number NBU 920-12E
Qtr/Qtr SW/NW Section 12 Township 9S Range 20E
Lease Serial Number UTU-0144868B
API Number 43-047-50163

Spud Notice – Spud is the initial spudding of the well, not drilling out below a casing string.

Date/Time _____ AM ☐ PM ☐

Casing – Please report time casing run starts, not cementing times.

- ☐ Surface Casing
☐ Intermediate Casing
☐ Production Casing
☐ Liner
☐ Other

Date/Time _____ AM ☐ PM ☐

BOPE

- ☒ Initial BOPE test at surface casing point
☐ BOPE test at intermediate casing point
☐ 30 day BOPE test
☐ Other

Date/Time 12/08/2010 04:00 AM ☒ PM ☐

Remarks TIME IS ESTIMATED

RECEIVED

DEC 06 2010

DIV. OF OIL, GAS & MINING

SUBMIT AS EMAIL

Print Form

BLM - Vernal Field Office - Notification Form

Operator ANADARKO Rig Name/# PIONEER 69
Submitted By BRAD PEDERSEN Phone Number 435-828-0982
Well Name/Number NBU 920-12E
Qtr/Qtr SW/NW Section 12 Township 9S Range 20E
Lease Serial Number UTU-0144868B
API Number 43-047-50163

Spud Notice – Spud is the initial spudding of the well, not drilling out below a casing string.

Date/Time _____ AM ☐ PM ☐

Casing – Please report time casing run starts, not cementing times.

- ☐ Surface Casing
☐ Intermediate Casing
☒ Production Casing
☐ Liner
☐ Other

Date/Time 12/20/2010 22:00 AM ☐ PM ☒

BOPE

- ☐ Initial BOPE test at surface casing point
☐ BOPE test at intermediate casing point
☐ 30 day BOPE test
☐ Other

Date/Time _____ AM ☐ PM ☐

Remarks TIME IS APPROXAMATLEY

RECEIVED

DEC 20 2010

DIV. OF OIL, GAS & MINING

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-0144868B
1. TYPE OF WELL Gas Well		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		8. WELL NAME and NUMBER: NBU 920-12E
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2080 FNL 0747 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWNW Section: 12 Township: 09.0S Range: 20.0E Meridian: S		9. API NUMBER: 43047501630000
PHONE NUMBER: 720 929-6007 Ext		9. FIELD and POOL or WILDCAT: NATURAL BUTTES
COUNTY: UINTAH		STATE: UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
TYPE OF SUBMISSION	TYPE OF ACTION	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> ALTER CASING	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CASING REPAIR	
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 12/21/2010	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	
	<input type="checkbox"/> CHANGE TUBING	
	<input type="checkbox"/> CHANGE WELL STATUS	
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	
	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> FRACTURE TREAT	
	<input type="checkbox"/> OPERATOR CHANGE	
	<input type="checkbox"/> PLUG AND ABANDON	
	<input type="checkbox"/> PRODUCTION START OR RESUME	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. FINISHED DRILLING FROM 2780' TO 10,927' ON DECEMBER 19, 2010. RAN 4 1/2" 11.6# I-80 PRODUCTION CSG. PUMP 40 BBLS SPACER, LEAD CEMENT W/ 644 SX CLASS G PREM LITE @ 12.8 PPG, 1.85 YD. TAILED CEMENT W/ 1348 SX CLASS G 50/50 POZ MIX @ 14.3 PPG, 1.31 YD. DISPLACED W/ 168 BBLS CLAYTREAT WATER, FINAL LIFT 3250 PSI. BUMPED PLUG @ 3750, FLOATS HELD. 30 BBLS SPACER BACK TO PIT. LOST PARTIAL RETURNS 158 BBLS INTO DISPLACEMENT. TOP OF TAIL EST 4800'. RD CEMENTERS AND CLEANED PITS. RELEASED PIONEER RIG #69 ON DECEMBER 21, 2010 @ 1800 HRS.		
<div style="text-align: right; font-weight: bold; font-size: 1.2em;"> Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY </div>		
NAME (PLEASE PRINT) Gina Becker		PHONE NUMBER 720 929-6086
SIGNATURE N/A		TITLE Regulatory Analyst II
DATE 12/22/2010		

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-0144868B
1. TYPE OF WELL Gas Well		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		8. WELL NAME and NUMBER: NBU 920-12E
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2080 FNL 0747 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWNW Section: 12 Township: 09.0S Range: 20.0E Meridian: S		9. API NUMBER: 43047501630000
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		9. FIELD and POOL or WILDCAT: NATURAL BUTTES
TYPE OF SUBMISSION	TYPE OF ACTION	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input checked="" type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	
<input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 3/25/2011	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER: <input style="width: 100px;" type="text"/>	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION	
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. THE SUBJECT WELL WAS PLACED ON PRODUCTION ON 03/25/2011 AT 2:30 PM. THE CHRONOLOGICAL WELL HISTORY WILL BE SUBMITTED WITH THE WELL COMPLETION REPORT.		
Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY		
NAME (PLEASE PRINT) Sheila Wopsock	PHONE NUMBER 435 781-7024	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 3/29/2011	

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No.
UTU0144868B

1a. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Dry <input type="checkbox"/> Other			6. If Indian, Allottee or Tribe Name		
b. Type of Completion <input checked="" type="checkbox"/> New Well <input type="checkbox"/> Work Over <input type="checkbox"/> Deepen <input type="checkbox"/> Plug Back <input type="checkbox"/> Diff. Resvr. Other _____			7. Unit or CA Agreement Name and No. UTU63047A		
2. Name of Operator KERR MCGEE OIL & GAS ONSHORE, Mail: gina.becker@anadarko.com			8. Lease Name and Well No. NBU 920-12E		
3. Address POBOX 173779 DENVER, CO 80217			3a. Phone No. (include area code) Ph: 720-929-6086		
4. Location of Well (Report location clearly and in accordance with Federal requirements)* At surface SWNW 2080FNL 0747FWL 40.051554 N Lat, 109.622032 W Lon At top prod interval reported below SWNW 2080FNL 0747FWL 40.051554 N Lat, 109.622032 W Lon At total depth SWNW 2080FNL 0747FWL 40.051554 N Lat, 109.622032 W Lon			9. API Well No. 43-047-50163		
14. Date Spudded 11/10/2009			15. Date T.D. Reached 12/19/2010		
16. Date Completed <input type="checkbox"/> D & A <input checked="" type="checkbox"/> Ready to Prod. 03/25/2011			17. Elevations (DF, KB, RT, GL)* 4716 GL		
18. Total Depth: MD 10927 TVD 10922			19. Plug Back T.D.: MD 10862 TVD 10857		
20. Depth Bridge Plug Set: MD TVD			21. Type Electric & Other Mechanical Logs Run (Submit copy of each) CBL-HDIL/ZDL/CNGR		
22. Was well cored? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (Submit analysis) Was DST run? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (Submit analysis) Directional Survey? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (Submit analysis)					

23. Casing and Liner Record (Report all strings set in well)

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sk. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
20.000	14.000 STL	36.7		40		28			
11.000	8.625 IJ-55	28.0		2763		530		0	
7.875	4.500 I-80	11.6		9422		1992		560	
7.875	4.500 P110	11.6	9422	10908					

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2.375	10195							

25. Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) WASATCH	6736	8287	6736 TO 8287	0.360	69	OPEN
B) MESAVERDE	8600	10868	8600 TO 10868	0.360	142	OPEN
C)						
D)						

26. Perforation Record

27. Acid, Fracture, Treatment, Cement Squeeze, Etc.

Depth Interval	Amount and Type of Material
6736 TO 10868	PUMP 6,805 BBLs SLICK H2O & 235,389 LBS SAND

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
03/25/2011	03/28/2011	24	→	0.0	1998.0	622.0			FLOWES FROM WELL
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
20/64	2136	2475.0	→	0	1998	622		PGW	

28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
			→						

(See Instructions and spaces for additional data on reverse side)

ELECTRONIC SUBMISSION #107289 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED **

RECEIVED

MAY 10 2011

DIV. OF OIL, GAS & MINING

28b. Production - Interval C									
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
			→						

28c. Production - Interval D									
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
			→						

29. Disposition of Gas(Sold, used for fuel, vented, etc.)
SOLD

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top
					Meas. Depth
GREEN RIVER	1834				
BIRD'S NEST	2083				
MAHOGANY	2666				
WASATCH	5331	8557			
MESAVERDE	8557	10927			

32. Additional remarks (include plugging procedure):
 Attached is the chronological well history & final survey. Completion chrono details individual frac stages.

33. Circle enclosed attachments:

- | | | | |
|---|--------------------|---------------|-----------------------|
| 1. Electrical/Mechanical Logs (1 full set req'd.) | 2. Geologic Report | 3. DST Report | 4. Directional Survey |
| 5. Sundry Notice for plugging and cement verification | 6. Core Analysis | 7. Other: | |

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions):

**Electronic Submission #107289 Verified by the BLM Well Information System.
 For KERR MCGEE OIL & GAS ONSHORE,L, sent to the Vernal**

Name (please print) GINA T. BECKER

Title REGULATORY ANALYST

Signature _____ (Electronic Submission)

Date 04/29/2011

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ****

US ROCKIES REGION
Operation Summary Report

Well: NBU 920-12E			Spud Conductor: 11/10/2009					Spud Date: 11/16/2009	
Project: UTAH-UINTAH			Site: NBU 920-12E					Rig Name No: PIONEER 69/69, PROPETRO/	
Event: DRILLING			Start Date: 11/10/2009					End Date: 12/21/2010	
Active Datum: RKB @4,737.00ft (above Mean Sea Level)			UWI: SW/NW/0/9/S/20/E/12/0/0/26/PM/N/2,080.00/W/0/747.00/0/0						
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation	
11/16/2009	0:00 - 3:30	3.50	DRLSUR	01	B	P		MOVE RIG IN, DRESS CONDUCTOR, INSTALL AIR BOWL, INSTALL BOWIE LINE, RIG UP RIG, RIG UP PUMPS. P/U AIR HAMMER	
	3:30 - 5:30	2.00	DRLSUR	02	A	P		AIR SPUD 11/16/2009 03:30, AIR HAMMER TO 120'	
	5:30 - 8:00	2.50	DRLSUR	06	A	P		LD AIR HAMMER, P/U MOTOR SN 8049, M/U 11" QD507 W/ 7-18'S, SN 7018430, P/U 8" COLLARS.	
	8:00 - 11:30	3.50	ALL	06	A	Z		MOTOR WAS FROZEN, LD MOTOR AND THAW W HEATERS, HAVE MOTOR DELIVERED FROM TOWN. P/U BACK UP MOTOR AND BLEW AIR THROUGH MOTOR. TRIP BACK IN.	
	11:30 - 0:00	12.50	DRLSUR	02	B	P		DRILL 120'- 1550' (1430', 114'/HR)WOB 5-18K RPM 45, MOTOR RPM 104, GPM 650, ON/OFF PSI-1300/1600, UP/DOWN/ROT= 54/50/48 4K DRAG.	
11/17/2009	0:00 - 4:30	4.50	DRLSUR	02	B	P		DRILL 1550'- 1900' (350',78'/HR)WOB 18K RPM 45, MOTOR RPM 104, GPM 650, ON/OFF PSI-1300/1600, UP/DOWN/ROT= 58/54/52 4K DRAG.	
	4:30 - 5:00	0.50	DRLSUR	10	A	P		WIRELINE SURVEY 1820'= .25 DEG INC. ONLY	
	5:00 - 17:30	12.50	DRLSUR	02	B	P		DRILL 1900'-2780' (880',70'/HR) WOB 22K RPM 45, MOTOR RPM 104, GPM 650, ON/OFF PSI-1300/1600, UP/DOWN/ROT= 70/68/65 2K DRAG. TD 11/17/2009 17:30, MOTOR LOCKED UP @ 2780'.	
	17:30 - 20:30	3.00	MAINT	08	B	Z		WORK ON AIR BOOSTER. (UNABLE TO GET AIR BOOSTER UP AND RUNNING) CIRC HOLE THROUGH OUT REPAIRS.	
	20:30 - 21:00	0.50	CSG	10	A	P		WIRELINE SURVEY 2700'= 3/4 DEGREE INC. ONLY.	
11/18/2009	21:00 - 0:00	3.00	CSG	06	D	P		LDDP, LD BHA.	
	0:00 - 3:00	3.00	CSG	06	A	P		LDDS, LD BHA. MUD MOTOR BROKE AT FIRST BREAK. BROKEN THREAD. MOTOR 128 HRS. BREAK BIT AND LAY DOWN MOTOR.	
	3:00 - 7:00	4.00	CSG	12	C	P		RUN 65 JTS OF 8-5/8", 28#, J-55, 8 RD LTC. LAND CSG @ 2749'KB, BAFFLE PLATE RAN IN TOP OF SHOE JT @ 2703'KB. FILL PIPE 1000' AND 2000'.	
	7:00 - 7:30	0.50	RDMO	01	E	P		RIG DOWN RIG AND RELEASE RIG 11/18/2009 16:00 COLLAR INSPECTION AND OVERHEAD INSPECTION	
	7:30 - 12:00	4.50	CSG	12	E	P		TEST LINES TO 2000' PSI, PUMP 130 BBLS OF H2O , PUMP 20 BBLS OF GEL WATER. PUMP 220 (149.7 BBLS) SX OF 11#, 3.82 YD, 23 GAL SX HI FILL LEAD CEMENT. PUMP 175 SX (35.8 BBLS) OF 15.8#, 1.15 YD, 5 GAL/SK TAIL CEMENT, DROP PLUG ON FLY AND DISPLACE W/ 166 BBLS OF 8.3# H2O, 10 BBLS OF LEAD TO SURFACE W/ 620 PSI OF LIFT @ 5 BBLS/MIN. LAND PLUG 1000 PSI AND CHECK FLOAT. FLOAT HELD. PUMP 85 SX (17.4 BBLS) OF 4% CALC 15.8# 1.15 YD, 5 GAL/SK CEMENT DOWN 1" 2 BBLS OF CEMENT TO SURFACE. CEMENT FELL BACK APPROX 150'. WAIT 2 HR AND PUMP 10.2 SX (10.2 BBLS) OF SAME CEMENT. CEMENT TO SUFACE AND STAYED.	
12/6/2010	19:30 - 0:00	4.50	MIRU	01	E	P		RDRT	
12/7/2010	0:00 - 6:00	6.00	MIRU	01	E	P		RD AND WINTERIZE THE RIG FOR THE MOVE	

US ROCKIES REGION
Operation Summary Report

Well: NBU 920-12E		Spud Conductor: 11/10/2009		Spud Date: 11/16/2009	
Project: UTAH-UINTAH		Site: NBU 920-12E		Rig Name No: PIONEER 69/69, PROPETRO/	
Event: DRILLING		Start Date: 11/10/2009		End Date: 12/21/2010	
Active Datum: RKB @4,737.00ft (above Mean Sea Level)		UWI: SW/NW/0/9/S/20/E/12/0/0/26/PM/N/2,080.00/W/0/747.00/0/0			

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	6:00 - 10:00	4.00	MIRU	01	A	P		SAFETY MEETING WITH WEST ROC, RIG CREWS, AND MOUNTAIN WEST. RIG DOWN CAMPS, SCOPE AND LD DERRICK. MOVE EQUIPMENT F/ THE NBU 920-12H TO THE NBU 920-12E. 7 BED TRUCKS,3 HAUL TRUCKS, 2 FORKLIFTS,3 SWAMPERS
	10:00 - 0:00	14.00	MIRU	01	A	P		SPOT THE SUB, CARRIER, BACK YARD, X/O #2 PUMP, BLEED RAMS, AND SCOPE UP THE DERRICK. R/U SUIT CASES , ELECTRICAL.RU THE FLOOR, REBUILD HOPPER HOUSE LINES, BOILER.
12/8/2010	0:00 - 5:00	5.00	MIRU	01	B	P		RIG UP FLARE LINES, FLOOR, MISC. EQUIP.
	5:00 - 7:30	2.50	MIRU	14	A	P		NIPPLE UP BOP , FUNCTION TEST
	7:30 - 12:30	5.00	MIRU	15	A	P		S/M W/ B & C QUICK TEST, R/U & TEST FLOOR VALVES ,UPPER & LOWER KELLY VALVES, PIPE RAMS,BLIND RAMS, INSIDE & OUTSIDE KILL LINE & CHOKE LINE VALVES, HCR VALVE, & CHOKE MANIFOLD 250 PSI/ 5 MIN, 5000 PSI/ 10 MIN, ANNULAR 250 PSI/ 5 MIN, 2500 PSI/ 10 MIN, & CASING TO 1500 PSI/30 MIN, R/D TESTER, (JAKE BIRCHELL W/ BLM WITNESSED TEST) INSTALL WEAR RING
	12:30 - 18:00	5.50	MIRU	06	A	P		S/M W/ KIMZEY R/U & P/U Q506F BIT, .20 RPG/ 1.5 BEND INTEQ MOTOR, DIR TOOLS ORIENT MWD, 11 DC, 3 JTS HWD, 63 JTS DP TO 2571', R/D KIMZEY
	18:00 - 19:00	1.00	MIRU	09	A	P		CUT & SLIP 125' DRLG LINE
	19:00 - 20:00	1.00	MIRU	23		P		INSTALL DRILLING RUBBER & DRIVE BUSHINGS, PRESPUD INSPECTION
	20:00 - 22:30	2.50	DRLPRO	02	F	P		SPUD @ 20:00 12/8/2010 DRILL CMT & F.E F/ 2652' TO 2794'
	22:30 - 0:00	1.50	DRLPRO	02	B	P		DRILL & SURVEY F/ 2794' TO 2895' (101' @ 67.3' HR) WOB 15, RPM 60, MMRPM 91, SPM 120, GPM 454, UP/SO/ROT 88-84-86, ON/OFF 868/1189, DIFF 280-410, WATER
12/9/2010	0:00 - 6:00	6.00	DRLPRO	02	B	P		DRILL F/ 2895' TO 3267' (372' 62' HR) WOB 15-18, RPM 55-60, MMRPM 91, SPM 120, GPM 454, UP-SO-ROT 92-85-90 ,DIFF 280-410, SLIDE 2919-2934, 3013-3028, 3108-3123 ,WT 9.2, VIS 30
	6:00 - 17:30	11.50	DRLPRO	02	B	P		DRILL F/ 3267' TO 4342' (1075' @ 93.4' HR) WOB 18, RPM 55-60, MMRPM 91, SPM 120, GPM 454, UP-SO-ROT 105-90-100, ON/OFF 1007-1354, DIFF 310-440, WT 10.2, VIS 36
	17:30 - 18:00	0.50	DRLPRO	07	A	P		RIG SERVICE
	18:00 - 0:00	6.00	DRLPRO	02	B	P		DRILL F/ 4342' TO 4719' (377' @ 62.8' HR) WOB 18, RPM 55-60, MMRPM 91,SPM 120, GPM 454, UP/SO/ROT 115-105-111, ON/OFF 1209-1606, DIFF 280-430, SLIDE 4438'-4453' , WT 10.1, VIS 38
12/10/2010	0:00 - 6:00	6.00	DRLPRO	02	B	P		DRILL F/ 4719' TO 5070' (351' @ 58.5' HR) WOB 18-20, RPM 55-60, MMRPM 91, SPM 120, GPM 454, UP/SO/ROT 119-108-116, ON/OFF 1209-1606, DIFF 280-410 ,SLIDE 4944-4949, 5006-5013, WT 10.1, VIS 38
	6:00 - 15:00	9.00	DRLPRO	02	B	P		DRILL F/ 5070' TO 5700' (630' @ 70' HR) WOB 18-20, RPM 50-60, MMRPM 91, SPM 120, GPM 454, UP/SO/ROT 130-110-123, ON/OFF 1350-1698, DIFF 200-380, WT 10.4 VIS 38
	15:00 - 15:30	0.50	DRLPRO	07	A	P		RIG SERVICE

US ROCKIES REGION
Operation Summary Report

Well: NBU 920-12E		Spud Conductor: 11/10/2009	Spud Date: 11/16/2009
Project: UTAH-UINTAH	Site: NBU 920-12E		Rig Name No: PIONEER 69/69, PROPETRO/
Event: DRILLING	Start Date: 11/10/2009	End Date: 12/21/2010	
Active Datum: RKB @4,737.00ft (above Mean Sea Level)		UWI: SW/NW/0/9/S/20/E/12/0/0/26/PM/N/2,080.00/W/0/747.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
12/11/2010	15:30 - 0:00	8.50	DRLPRO	02	B	P		DRILL F/ 5700' TO 5988' (288' @ 33.8' HR) WOB 18-22, RPM 55-60, MMRPM 91, SPM 120, GPM 454, UP/SO/ROT 135-120-130, ON/OFF 1498-1905, DIFF 230-390, WT 10.4, VIS 39 (BIT BALLING UP)PUMP NUT SWEEPS
	0:00 - 6:00	6.00	DRLPRO	02	B	P		DRILL F/ 5988' TO 6177' (189' @ 31.5' HR) WOB 20-22, RPM 55-60, MMRPM 91, SPM 120, GPM 454, UP/SO/ROT 137-125-131, ON/OFF 1498-1905, DIFF 230-390, WT 10.4, VIS 39 (BIT BALLING PUMPING NUT SWEEPS)
	6:00 - 17:00	11.00	DRLPRO	02	B	P		DRILL F/ 6177' TO 6650' (473' @ 43' HR) WOB 20-24, RPM 50-60, MMRPM 91, SPM 120, GPM 454, UP/SO/ROT 145-125-135, ON/OFF 1524-1824, DIFF 180-410, WT 10.5, VIS 39, (BIT BALLING PUMPING NUT SWEEPS)
	17:00 - 17:30	0.50	DRLPRO	07	A	P		RIG SERVICE
	17:30 - 0:00	6.50	DRLPRO	02	B	P		DRILL F/ 6650' TO 6998' (348' @ 53.5' HR) WOB 20-24, RPM 55-60, MMRPM 91, SPM 120, GPM 454, UP/SO/ROT 151-138-145, ON/OFF 1585-1841, DIFF 180-410, WT 10.8, VIS 40
12/12/2010	0:00 - 6:00	6.00	DRLPRO	02	B	P		DRILL F/ 6998' TO 7283' (285' @ 47.5' HR , RPM 50-60, MMRPM 91, SPM 120, GPM 454, UP/SO/ROT 155-143-149, ON/OFF 1585-1841, DIFF180-410, WT 10.8, VIS 40
	6:00 - 17:30	11.50	DRLPRO	02	B	P		DRILL F/ 7283' TO 7662' (379' @ 32.9' HR) WOB 20-24, RPM 50-60, MMRPM 91, SPM 120, GPM 454, UP/SO/ROT 155-135-149, ON/OFF 1665-2148, DIFF 180-480, WT 10.8, VIS 37, SLIDE 7504-7510, 7536-7542
	17:30 - 18:00	0.50	DRLPRO	07	A	P		RIG SERVICE
	18:00 - 0:00	6.00	DRLPRO	02	B	P		DRILL F/ 7662' TO 7799' (137' @ 22.8' HR) WOB 22-25, RPM 55-60, MMRPM 91, SPM 120, GPM 454, UP/SO/ROT 165-150-157, , ON/OFF 1786-2164, DIFF 170-380, WT 10.8, VIS 39 SLIDE 7662-7676
	0:00 - 6:00	6.00	DRLPRO	02	B	P		DRILL F/ 7799' TO 7903' (104' @ 17.3' HR) WOB 22-25, RPM 55-60, MMRPM 91, SPM 120, GPM 454, UP/SO/ROT 165-150-157, ON/OFF 1786-2164, DIFF 170-380, WT 10.8, VIS 39, SLIDE 7662-7676
12/13/2010	6:00 - 15:30	9.50	DRLPRO	02	B	P		DRILL F/ 7903' TO 8104' (201' @ 21.1' HR) WOB 20-25, RPM 45-65, MMRPM 83, SPM 110, GPM 416, UP/SO/ROT 170-150-163, ON/OFF 1939-2245, DIFF 150-310, WT 11.4, VIS 38, LCM 3%, (LOST 75 BBLS TO SEEPAGE)
	15:30 - 16:30	1.00	DRLPRO	05	C	P		CIRC F/ TRIP, MIX & PUMP PILL
	16:30 - 21:00	4.50	DRLPRO	06	A	P		TOOH L/D MOTOR & BIT
	21:00 - 0:00	3.00	DRLPRO	06	A	P		P/U Q506FX, .16 RPG/1.5 MOTOR, ORIENT MWD, TIH
	0:00 - 2:30	2.50	DRLPRO	06	A	P		FINISH TIH, FILL PIPE @ SHOE & 5000'
	2:30 - 3:00	0.50	DRLPRO	03	D	P		WASH 42' TO BTM, NO FILL
	3:00 - 16:00	13.00	DRLPRO	02	B	P		DRILL F/ 8104' TO 8420' (316' @ 24.3' HR) WOB 16-18, RPM 50-55, MMRPM 69, SPM 115, GPM 435, UP/SO/ROT 178-150-168, ON/OFF 2211-1947 ,DIFF 217-443, WT 11.5, VIS 39, SLIDE 8167-8182
	16:00 - 16:30	0.50	DRLPRO	07	A	P		RIG SERVICE
	16:30 - 0:00	7.50	DRLPRO	02	B	P		DRILL F/ 8420' TO 8622' (202' @ 26.9' HR) WOB 18-20, RPM 45-55, MMRPM 69, SPM 115 GPM 435, UP/SO/ROT 185-152-172, ON/OFF 2237-1950, DIFF 182-368 WT 11.8, VIS 41, SLIDE 8515-8530

US ROCKIES REGION
Operation Summary Report

Well: NBU 920-12E		Spud Conductor: 11/10/2009		Spud Date: 11/16/2009	
Project: UTAH-UINTAH		Site: NBU 920-12E		Rig Name No: PIONEER 69/69, PROPETRO/	
Event: DRILLING		Start Date: 11/10/2009		End Date: 12/21/2010	
Active Datum: RKB @4,737.00ft (above Mean Sea Level)		UWI: SW/NW/0/9/S/20/E/12/0/0/26/PM/N/2,080.00/W/0/747.00/0/0			

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
12/15/2010	0:00 - 9:30	9.50	DRLPRO	02	B	P		DRILL F/ 8622' TO 8894' (272' @ 28.6' HR) WOB 18-20, RPM 45-55, MMRPM 69, SPM 115, GPM 435, UP/SO/ROT 180-160-172, ON/OFF 2400-1960, DIFF 150-378, WT 11.8, VIS 41, SLIDE 8704-8709
	9:30 - 10:00	0.50	DRLPRO	05	C	P		CIRC, MIX & PUMP PILL
	10:00 - 15:00	5.00	DRLPRO	06	A	P		TOOH L/D MOTOR & BIT, (TIGHT SPOTS @ 6315', 5230' & 5069
	15:00 - 17:30	2.50	DRLPRO	06	A	P		P/U Q506F, HUNTING .16 RPG/1.5 BEND MOTOR, ORIENT DIR TOOLS TIH TO SHOE
	17:30 - 19:00	1.50	DRLPRO	09	A	P		CUT & SLIP DRILL LINE
	19:00 - 21:30	2.50	DRLPRO	06	A	P		TIH FILL PIPE @ 6000'
	21:30 - 0:00	2.50	DRLPRO	02	B	P		DRILL F/ 8894' TO 8946' (52' @ 20.8' HR) WOB 18-21, RPM 45-55, MMRPM 69, SPM 115, GPM 435, UP/SO/ROT 185-160-175, ON/OFF 2466-2130, DIFF 136-380, WT 11.9, VIS 40, 4% LCM
12/16/2010	0:00 - 6:00	6.00	DRLPRO	02	B	P		DRILL F/ 8946' TO 9144' (198' @ 33' HR) WOB 18-21, RPM 45-55, MMRPM 69, SPM 115, GPM 435, UP/SO/ROT 190-160-175, ON/OFF 2466-2130, DIFF 136-380, WT 12, VIS 39, LCM 6%
	6:00 - 15:30	9.50	DRLPRO	02	B	P		DRILL F/ 9144' TO 9460' (316' @ 33.2' HR) WOB 18-22, RPM 55-65, MMRPM 69, SPM 120, GPM 454, ON/OFF 2880-2530, DIFF 147-398, WT 12.2, VIS 45, LCM 6%
	15:30 - 16:00	0.50	DRLPRO	07	A	P		RIG SERVICE
	16:00 - 0:00	8.00	DRLPRO	02	B	P		DRILL F/ 9460' TO 9808' (348' @ 43.5' HR) WOB 18-22, RPM 50-60, SPM 110, GPM 416, UP/SO/ROT 205-170-182, ON/OFF 2880-2270, DIFF 150-480, WT 12.5, VIS 46, LCM 7% (LOST 220 BBLs TO SEEPAGE)
12/17/2010	0:00 - 6:00	6.00	DRLPRO	02	B	P		DRILL F/ 9808' TO 10030' (222' @ 37' HR) WOB 20-22, RPM 50-65, MMRPM 69, SPM 115, GPM 435, UP/SO/ROT 205-170-182, ON/OFF 2680-2270, DIFF 138-480, WT 12.5, VIS 46, LCM 9%
	6:00 - 14:30	8.50	DRLPRO	02	B	P		DRILL F/ 10030' TO 10282' (252' @ 29.6' HR) WOB 22-25, RPM 45-65, MMRPM 67-69, SPM 105-115, 397-435, UP/SO/ROT 202-175-189, ON/OFF 2970-2280, DIFF 124-410, WT 12.8, VIS 43, LCM 10%
	14:30 - 15:00	0.50	DRLPRO	07	A	P		RIG SERVICE
	15:00 - 20:30	5.50	DRLPRO	02	B	P		DRILL F/ 10282' TO 10390' (108' @ 19.6' HR) WOB 24-26, RPM 40-65, MMRPM 67-69, SPM 105-115, GPM 398-435, UP-SO-ROT 205-180-192, ON/OFF 2870-2280, DIFF 124-380, WT 12.8, VIS 43, LCM 10%
	20:30 - 22:00	1.50	DRLPRO	05	C	P		CIRC, MIX & PUMP PILL
12/18/2010	22:00 - 0:00	2.00	DRLPRO	06	A	P		TFNB
	0:00 - 4:00	4.00	DRLPRO	06	A	P		TOOH L/D DIR TOOLS, MOTOR, BIT, TIGHT 6732,6319 25-30K
	4:00 - 7:00	3.00	DRLPRO	06	A	P		P/U Q506F, HUNTING .16 RPG/STRAIGHT MOTOR, TIH TO SHOE FILL PIPE
	7:00 - 8:00	1.00	DRLPRO	09	A	P		CUT & SLIP 70' DRILL LINE
	8:00 - 8:30	0.50	DRLPRO	07	A	P		RIG SERVICE
	8:30 - 12:00	3.50	DRLPRO	06	A	P		TIH , FILL PIPE @ 6000'
	12:00 - 12:30	0.50	DRLPRO	03	D	P		WASH 93' TO BOTTOM ,NO FILL
	12:30 - 18:00	5.50	DRLPRO	02	B	P		DRILL F/ 10390' TO 10586' (196' @ 35.6' HR) WOB 18-22, RPM 45-55, MMRPM 67, SPM 110, GPM 416, UP/SO/ROT 202-175-190, ON/OFF 2750-2300, DIFF 210-430, WT 12.8, VIS 44, LCM 10%

US ROCKIES REGION
Operation Summary Report

Well: NBU 920-12E		Spud Conductor: 11/10/2009		Spud Date: 11/16/2009	
Project: UTAH-UINTAH		Site: NBU 920-12E		Rig Name No: PIONEER 69/69, PROPETRO/	
Event: DRILLING		Start Date: 11/10/2009		End Date: 12/21/2010	
Active Datum: RKB @4,737.00ft (above Mean Sea Level)		UWI: SW/NW/0/9/S/20/E/12/0/0/26/PM/N/2,080.00/W/0/747.00/0/0			

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	18:00 - 0:00	6.00	DRLPRO	02	B	P		DRILL F/ 10586' TO 10800' (214' @ 35.6' HR) WOB 22-26, RPM 45-60, MMRPM 67, SPM 110, GPM 416, UP,SO,ROT 220-170-194, ON/OFF 2628- 2300, DIFF 70-210, WT 12.9, VIS 43, LCM 13%, (LOST 140 BBLS TO SEEPAGE)
12/19/2010	0:00 - 6:00	6.00	DRLPRO	02	B	P		DRILL F/ 10800' TO 10927' (127' @ 21.1' HR) WOB 24-27, RPM 40-65, MMRPM 67, SPM 110' GPM 416, UP/SO/ROT 220-170-194, ON/OFF 2628-2300, DIFF 70-210, WT 12.9, VIS 43, LCM 13%
	6:00 - 7:30	1.50	DRLPRO	05	C	P		CIRC F/ SHORT TRIP, PUMP PILL, BLOW KELLY DRY
	7:30 - 12:00	4.50	DRLPRO	06	E	P		SHORT TRIP TO CSG SHOE , TIGHT 6310
	12:00 - 15:30	3.50	DRLPRO	06	E	P		FILL PIPE, TIH, NO PROBLEMS
	15:30 - 17:30	2.00	DRLPRO	05	C	P		CIRC F/ LOGS, MIX & PUMP PILL ,BLOW KELLY DRY
	17:30 - 22:30	5.00	DRLPRO	06	A	P		TOOH F/ LOGS, L/D MOTOR & BIT
	22:30 - 0:00	1.50	DRLPRO	11	C	P		SAFETY MEETING W/ BAKER ATLAS, R/U & START TRIPLE COMBO RUN
12/20/2010	0:00 - 5:00	5.00	DRLPRO	11	C	P		RUN TRIPLE COMBO LOGS TO 10926' ,NO PROBLEMS, R/D LOGGERS
	5:00 - 10:00	5.00	DRLPRO	06	A	P		P/U R/R TRICONE BIT & BIT SUB TIH, FILL PIPE @ SHOE & 6000'
	10:00 - 12:00	2.00	DRLPRO	05	C	P		CIRC F/ LDDP, S/M W/ KIMZEY & R/U, MIX & PUMP PILL, BLOW KELLY DRY
	12:00 - 22:30	10.50	DRLPRO	06	A	P		LDDP/ BREAK KELLY, L/D BHA, PULL WEAR RING
	22:30 - 0:00	1.50	DRLPRO	12	C	P		S/M W/ KIMZEY CASING, R/U & START RUNNING 4.5 PRODUCTION CASING
12/21/2010	0:00 - 9:30	9.50	DRLPRO	12	C	P		RUN 34 JTS P110, 223 JTS I80,4.5, 11.6 PRODUCTION CASING ,SHOE @ 10907', FLOAT @ 10882', MARKERS @ 8557', & 5212'
	9:30 - 10:00	0.50	DRLPRO	07	A	P		RIG SERVICE
	10:00 - 11:30	1.50	DRLPRO	05	D	P		CIRC F/ CEMENT, R/D KIMZEY, S/M W/ BJ SERVICES & R/U
	11:30 - 14:00	2.50	DRLPRO	12	E	P		PUMP 40 BBLS PREFLUSH, 644 SX 12.8#, 1.85 YLD LEAD, 1348 SX 14.3#, 1.31 YLD TAIL, DISPLACE W/ 168 BBLS CLAYTREAT WATER, FINAL LIFT 3250 PSI, BUMP PLUG @ 3750, FLOATS HELD,30 BBLS SPACER BACK TO PIT, LOST PARTIAL RETURNS 158 BBLS INTO DISPLACEMENT, TOP OF TAIL EST 4800', R/D CEMENTERS
	14:00 - 18:00	4.00	DRLPRO	14	A	P		SET C22 SLIPS THROUGH STACK @ 120K, NIPPLE DOWN, CUT OFF CASING, CLEAN PITS ,RELEASE RIG @ 1800, 12/21/2010 TO NBU 920-12F

US ROCKIES REGION
Operation Summary Report

Well: NBU 920-12E		Spud Conductor: 11/10/2009		Spud Date: 11/16/2009	
Project: UTAH-UINTAH		Site: NBU 920-12E		Rig Name No: PIONEER 69/69, PROPETRO/	
Event: DRILLING		Start Date: 11/10/2009		End Date: 12/21/2010	
Active Datum: RKB @4,737.00ft (above Mean Sea Level)		UWI: SW/NW/0/9/S/20/E/12/0/0/26/PM/N/2,080.00/W/0/747.00/0/0			

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	18:00 - 18:00	0.00	DRLPRO					<p>CONDUCTOR CASING: Cond. Depth set: 44 Cement sx used:</p> <p>SPUD DATE/TIME:</p> <p>SURFACE HOLE: Surface From depth: 44 Surface To depth: 2,794 Total SURFACE hours: 31.50 Surface Casing size: 8 5/8 # of casing joints ran: 65 Casing set MD: 2,749.0 # sx of cement: 492.2 Cement blend (ppg): LEAD 11 / TAIL 15.8 Cement yield (ft3/sk): 3.82 LEAD/ 1.15 TAIL # of bbls to surface: 10 Describe cement issues: 2 TOP OFFS Describe hole issues:</p> <p>PRODUCTION: Rig Move/Skid start date/time: 12/7/2010 6:00 Rig Move/Skid finish date/time: 12/7/2010 14:30</p> <p>Total MOVE hours: 8.5 Prod Rig Spud date/time: 12/8/2010 20:00 Rig Release date/time: 12/21/2010 18:00 Total SPUD to RR hours: 310.0 Planned depth MD 10,939 Planned depth TVD 10,939 Actual MD: 10,927 Actual TVD: 10,922 Open Wells \$: \$1,020,373 AFE \$: \$1,080,716 Open wells \$/ft: \$93.38</p> <p>PRODUCTION HOLE: Prod. From depth: 2,794 Prod. To depth: 10,927 Total PROD hours: 204.5 Log Depth: 10926 Float Collar Top Depth: 10880.38 Production Casing size: 4.5, 11.6 # of casing joints ran: 34 JTS P110 ,223 JTS I-80 ,TOTAL 257 Casing set MD: 10,907.5 Stage 1 # sx of cement: 643 LEAD ,1347 TAIL Cement density (ppg): LEAD 12.8, TAIL 14.3 Cement yield (ft3/sk): LEAD 1.85, TAIL 1.31 Stage 2 # sx of cement: Cement density (ppg): Cement yield (ft3/sk): Top Out Cmt # sx of cement: Cement density (ppg): Cement yield (ft3/sk): Est. TOC (Lead & Tail) or 2 Stage : 225' LEAD ,4800' TAIL Describe cement issues: NO CEMENT TO SURFACE Describe hole issues: LOSSES IN WASATCH</p> <p>DIRECTIONAL INFO:</p>

US ROCKIES REGION
Operation Summary Report

Well: NBU 920-12E		Spud Conductor: 11/10/2009		Spud Date: 11/16/2009				
Project: UTAH-UINTAH		Site: NBU 920-12E		Rig Name No: PIONEER 69/69, PROPETRO/				
Event: DRILLING		Start Date: 11/10/2009		End Date: 12/21/2010				
Active Datum: RKB @4,737.00ft (above Mean Sea Level)		UWI: SW/NW/0/9/S/20/E/12/0/0/26/PM/N/2,080.00/W/0/747.00/0/0						
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
								KOP: Max angle: Departure: Max dogleg MD:

US ROCKIES REGION
Operation Summary Report

Well: NBU 920-12E	Spud Conductor: 11/10/2009	Spud Date: 11/16/2009
Project: UTAH-UINTAH	Site: NBU 920-12E	Rig Name No: SWABBCO 8/8
Event: COMPLETION	Start Date: 2/14/2011	End Date: 3/25/2011
Active Datum: RKB @4,737.00ft (above Mean Sea Level)		UWI: SW/NW/0/9/S/20/E/12/0/0/26/PM/N/2,080.00/W/0/747.00/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
3/18/2011	7:00 - 7:30	0.50	COMP	48		P		HSM, RIGGING DWN AROUND WELL W/ PSI.
	7:30 - 10:30	3.00	COMP	30	A	P		RD OFF NBU 920-12F, MIRU, SICP 1,000# PSI, BLEAD OFF SAME. ND WH NU BOPS, RU FLOOR.
	10:30 - 17:30	7.00	COMP	31	I	P		PU 37/8 BIT, BIT SUB & 343 JTS 23/8 L-80 OFF FLOAT. TAG UP @ 10,831' L/D 2 JTS RU SWIVEL SWI SDFWE.
3/21/2011	7:00 - 7:30	0.50	COMP	48		P		HSM, WORKING W/ SWIVEL CLEANING OUT TO PBTD.
	7:30 - 9:00	1.50	COMP	44	A	P		BROKE CIRC REV, D/O CMT F/ 10,831' TO 10,880' CIRC CLEAN HANG SWIVEL.
	9:00 - 15:00	6.00	COMP	31	I	P		L/D 134 JTS ON FLOAT, POOH W/ 144 JTS IN DERICK HAD TO SHUT DWN DUE TO HIGH WINDS, SWI SDFN.
3/22/2011	7:00 - 7:30	0.50	COMP	48		P		HSM, TESTING W/ B&C,
	7:30 - 8:30	1.00	COMP	31	I	P		0# PSI ON WELL, POOH W/ REM 66 JTS L/D BIT.
	8:30 - 15:00	6.50	COMP	30	D	P		ND BOPS NU FRAC VALVES, TEST 41/2 TO 500# FOR 15 MIN, 2500# FOR 15 MIN, 7,000# FOR 15 MIN. PRESSURE TEST SURF TO 200 PSI FOR 15 MIN, RD B&C. RU CASD HOLE.
3/23/2011								(STG#1) RIH W/ 31/8 EXP GNS, .23 GRM, .36" HLS, 90 DEG PHASING PERF F/
								10,866'-10,868' 4 SPF 8 HLS.
								10,844'-10,845' 4 SPF 4 HLS.
								10800'-10,801' 4 SPF 4 HLS.
								10,784'-10,785' 4 SPF 4 HLS.
3/23/2011	7:00 - 7:30	0.50	COMP	48		P		10,690'-10,691' 4 SPF 4 HLS. 24 HOLES TOTAL.
	7:30 - 13:30	6.00	COMP	46	E	P		SWI PREP TO FRAC IN AM. SDFN
	13:30 - 14:14	0.73	COMP	36	E	P		HSM, WORKING W/ FRAC & WIRE LINE CREWS.
								WAIT ON FRAC TECH, RU SAME.
								PRIME PUMPS & LINES TEST LINES TO 8,100#.
3/23/2011								SAFTEY MEETING START FRAACING
								(STG #1) WHP 1238 PSI, BRK 4194 PSI @ 4.6 BPM, ISIP 3549 PSI, FG .76
								PUMP 100 BBLS @ 41.1 BPM 6144 PSI = 100% PERFS OPEN
								MP 4347 PSI, MR 51.7 BPM, AP 5600 PSI, AR 46 BPM, ISIP 3340 PSI, FG .74.
								NPI -209 PSI, PMPD 948 BBLS OF SW & 21,260 LBS 30/50 SND & 5,000 LBS OF 20/40 RESIN SAND.
3/23/2011								TOTAL PROP 26,260 LBS
	14:14 - 16:15	2.02	COMP	36	E	P		(STG #2) PU 41/2" HAL CBP & 31/8 EXP GNS, 23 GRM, .36" HOLES, 90 DEG PHASING
								SET 8K CBP @ 10,474' & PERF 10,442'-10,444' 4 SPF 8 HLS, 10,377'-10,378' 4 SPF 4 HLS,
								10,346'-10,347' 4 SPF 4 HLS, 10,320'-10,321' 4 SPF 4 HLS, 10,236'-10,237' 4 SPF 4 HLS, TOTAL 24 HOLES.
								WHP 1249 PSI, BRK 4550 PSI @ 4.8 BPM, ISIP 3442 PSI, FG .77
3/23/2011								PUMP 100 BBLS @ 40 BPM 5720 PSI = 100% PERFS OPEN
								MP 6528 PSI, MR 51.2 BPM, AP 5650 PSI, AR 47 BPM, ISIP 3346 PSI, FG .76.
								NPI 96 PSI, PMPD 682 BBLS OF SW & 16,522 LBS 30/50 SND & 5,000 LBS OF 20/40 RESIN SAND.
								TOTAL PROP 21,522 LBS

US ROCKIES REGION
Operation Summary Report

Well: NBU 920-12E		Spud Conductor: 11/10/2009		Spud Date: 11/16/2009	
Project: UTAH-UINTAH		Site: NBU 920-12E		Rig Name No: SWABBCO 8/8	
Event: COMPLETION		Start Date: 2/14/2011		End Date: 3/25/2011	
Active Datum: RKB @4,737.00ft (above Mean Sea Level)		UWI: SW/NW/0/9/S/20/E/12/0/0/26/PM/N/2,080.00/W/0/747.00/0/0			

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	16:15 - 17:30	1.25	COMP	34	H	P		(STG #3) PU 41/2" HAL CBP & 31/8 EXP GNS, 23 GRM, .36" HOLES, 90 DEG PHASING SET 8K CBP @ 10,178' & PERF 10,147'-10,148' 4 SPF 4 HLS, 10,084'-10,085' 4 SPF 4, 8 HOLES. HAD MISS RUN. POOH SWI SDFN HSM, WORKING W/ WIRE LINE & FRAC CREW.
3/24/2011	7:00 - 7:30	0.50	COMP	48		P		(STG #3) RIH W/ 31/8 EXP 25 GRM, .36" HOLES, 90 DEG PHASING & PERF 10,014'-10,015' 4 SPF 4 HLS, 9940'-9942' 4 SPF 8 HLS, 9916'-9917' 4 SPF 4 HLS, 16 HOLES. WHP 390 PSI, BRK 4505 PSI @ 4.7 BPM, ISIP 2775 PSI, FG .71 PUMP 100 BBLS @ 49.4 BPM 6336 PSI = 100% PERFS OPEN MP 6567 PSI, MR 51.6 BPM, AP 5600 PSI, AR 45 BPM, ISIP 2854 PSI, FG .72. NPI 79 PSI, PMPD 802 BBLS OF SW & 22,792 LBS 30/50 SND & 5,000 LBS OF 20/40 RESIN SAND. TOTAL PROP 27,792 LBS
	7:30 - 8:10	0.67	COMP	36	E	P		(STG #4) PU 41/2" HAL CBP & 31/8 EXP GNS, 23 GRM, .36" HOLES, 90 DEG PHASING SET 8K CBP @ 9477' & PERF 9446'-9447' 4 SPF 4 HLS, 9363'-9364' 4 SPF 4 HLS, 9350'-9351' 4 SPF 4 HLS, 9280'-9281' 4 SPF 4 HLS, 9240'-9241' 4 SPF 4 HLS, 9200'-9201' 4SPF 4 HLS, TOTAL 24 HOLES. WHP 966 PSI, BRK 4815 PSI @ 4.7 BPM, ISIP 2781 PSI, FG .73 PUMP 100 BBLS @ 50 BPM 5537 PSI = 100% PERFS OPEN MP 6358 PSI, MR 50.9 BPM, AP 5000 PSI, AR 50 BPM, ISIP 3080 PSI, FG .76. NPI 299 PSI, PMPD 718 BBLS OF SW & 19,315 LBS 30/50 SND & 5,000 LBS OF 20/40 RESIN SAND. TOTAL PROP 24,315 LBS
	8:10 - 9:40	1.50	COMP	36	E	P		(STG #5) PU 41/2" HAL CBP & 31/8 EXP GNS, 23 GRM, .36" HOLES, 90 & 120 DEG PHASING SET 8K CBP @ 9113' & PERF 9082'-9083' 4SPF 4 HLS, 9006'-9007' 4 SPF 4 HLS, 8972'-8974' 3 SPF 6 HLS, 8920'-8921' 4 SPF 4 HLS, 8904'-8905' 4 SPF 4 HLS, TOTAL 22 HOLES. WHP 1458 PSI, BRK 4510 PSI @ 4.6 BPM, ISIP 2560 PSI, FG .73 PUMP 100 BBLS @ 49.9 BPM 5776 PSI = 100% PERFS OPEN MP 6765 PSI, MR 52.9 BPM, AP 5000 PSI, AR 50.5 BPM, ISIP 2860 PSI, FG .75. NPI 300 PSI, PMPD 845 BBLS OF SW & 24,194 LBS 30/50 SND & 5,000 LBS OF 20/40 RESIN SAND. TOTAL PROP 29,194 LBS
	9:40 - 11:20	1.67	COMP	36	E	P		

US ROCKIES REGION
Operation Summary Report

Well: NBU 920-12E		Spud Conductor: 11/10/2009	Spud Date: 11/16/2009
Project: UTAH-UINTAH		Site: NBU 920-12E	Rig Name No: SWABBCO 8/8
Event: COMPLETION		Start Date: 2/14/2011	End Date: 3/25/2011
Active Datum: RKB @4,737.00ft (above Mean Sea Level)		UWI: SW/NW/0/9/S/20/E/12/0/0/26/PM/N/2,080.00/W/0/747.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	11:20 - 12:46	1.43	COMP	36	E	P		(STG #6) PU 41/2" HAL CBP & 31/8 EXP GNS, 23 GRM, .36" HOLES, 90 DEG PHASING SET 8K CBP @ 8666' & PERF 8624'- 8626 4 SPF 8 HLS, 8600'-8604' 4 SPF 16 HLS , TOTAL 24 HOLES. WHP 627 PSI, BRK 3821 PSI @ 4.7 BPM, ISIP 2125 PSI, FG .68 PUMP 100 BBLS @ 50.4 BPM 4776 PSI = 100% PERFS OPEN MP 6059 PSI, MR 51.8 BPM, AP 4150 PSI, AR 50.6 BPM, ISIP 2622 PSI, FG .74. NPI 497 PSI, PMPD 836 BBLS OF SW & 25,254 LBS 30/50 SND & 5,000 LBS OF 20/40 RESIN SAND. TOTAL PROP 30,254 LBS
	12:46 - 14:01	1.25	COMP	36	E	P		(STG #7) PU 41/2" HAL CBP & 31/8 EXP GNS, 23 GRM, .36" HOLES, 90 DEG PHASING SET 8K CBP @ 8317' & PERF 8283'-8287' 4 SPF 16 HLS, 8036'-8038' 4 SPF 8 HLS , TOTAL 24 HOLES. WHP 593 PSI, BRK 2995 PSI @ 4.7 BPM, ISIP 2272 PSI, FG .71 PUMP 100 BBLS @ 47.2 BPM 5092 PSI = 100% PERFS OPEN MP 5420 PSI, MR 51.8 BPM, AP 4500 PSI, AR 50.3 BPM, ISIP 2600 PSI, FG .75. NPI 328 PSI, PMPD 652 BBLS OF SW & 19,796 LBS 30/50 SND & 5,000 LBS OF 20/40 RESIN SAND. TOTAL PROP 24,796 LBS
	14:01 - 15:17	1.27	COMP	36	E	P		(STG #8) PU 41/2" HAL CBP & 31/8 EXP GNS, 23 GRM, .36" HOLES, 90 & 120 DEG PHASING SET 8K CBP @ 7926' & PERF 7895'-7896' 4 SPF 4 HLS, 7820'-7821' 4 SPF 4 HLS, 7692'-7693' 4 SPF 4 HLS, 7648'-7649' 4 SPF 4 HLS, 7610'-7612' 3 SPF 6 HLS , TOTAL 22 HOLES. WHP 774 PSI, BRK 2967 PSI @ 4.8 BPM, ISIP 2035 PSI, FG .70 PUMP 100 BBLS @ 50.1 BPM 4928 PSI = 100% PERFS OPEN MP 5652 PSI, MR 53.3 BPM, AP 4350 PSI, AR 50.5 BPM, ISIP 2136 PSI, FG .71. NPI 101 PSI, PMPD 698 BBLS OF SW & 22,813 LBS 30/50 SND & 5,000 LBS OF 20/40 RESIN SAND. TOTAL PROP 27,813 LBS
	15:17 - 16:32	1.25	COMP	36	E	P		(STG #9) PU 41/2" HAL CBP & 31/8 EXP GNS, 23 GRM, .36" HOLES, 90 & 120 DEG PHASING SET 8K CBP @ 7133' & PERF 7101'-7103' 3 SPF 6 HLS, 6886'-6889' 3 SPF 9 HLS, 6736'-6738' 4 SPF 8 HLS, TOTAL 23 HOLES. WHP 605 PSI, BRK 2498 PSI @ 4.7 BPM, ISIP 1763 PSI, FG .69 PUMP 100 BBLS @ 50.8 BPM 3928 PSI = 100% PERFS OPEN MP 4132 PSI, MR 51.8 BPM, AP 3250 PSI, AR 51.1 BPM, ISIP 1453 PSI, FG .64. NPI -310 PSI, PMPD 624 BBLS OF SW & 18,403 LBS 30/50 SND & 5,040 LBS OF 20/40 RESIN SAND. TOTAL PROP 23,443 LBS TOTAL SAND= 235,389 LBS TOTAL WTR= 6805 BBLS TOTAL= 947 GAL SCALE INH TOTAL = 142 GALS BIOCID

US ROCKIES REGION
Operation Summary Report

Well: NBU 920-12E		Spud Conductor: 11/10/2009		Spud Date: 11/16/2009	
Project: UTAH-UINTAH		Site: NBU 920-12E		Rig Name No: SWABBCO 8/8	
Event: COMPLETION		Start Date: 2/14/2011		End Date: 3/25/2011	
Active Datum: RKB @4,737.00ft (above Mean Sea Level)		UWI: SW/NW/0/9/S/20/E/12/0/0/26/PM/N/2,080.00/W/0/747.00/0/0			

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
3/25/2011	16:32 - 18:00	1.47	COMP	34	I	P		(KILL PLUG) RIH SET 41/2 HAL 8K CBP @ 6686', POOH RD WIRE LINE & FRAC CREW.
	18:00 - 21:00	3.00	COMP	31	I	P		ND FRAC VALVES, NU BOPS RU FLOOR, RIH W/ POBS & 210 JTS 238 L-80, EOT @ 6648', RU DRLG EQUIP, SWI SDFN.
	7:00 - 7:30	0.50	COMP	48		P		HSM, WORKING W/ RIG PUMP.
	7:30 - 17:00	9.50	COMP	44	C			BROKE CIRC CONVENTIONAL TEST BOPS TO 3,000# RIH.
								C/O 20' SAND TAG 1ST PLUG @ 6686' DRL PLG IN 10 MIN 800# PSI INCREASE RIH.
								C/O 45' SAND TAG 2ND PLUG @ 7133' DRL PLG IN 12 MIN 800# PSI INCREASE RIH
								C/O 30' SAND TAG 3RD PLUG @ 7926' DRL PLG IN 9 MIN 900# PSI INCREASE RIH
								C/O 25' SAND TAG 4TH PLUG @ 8317' DRL PLG IN 5 MIN 1000# PSI INCREASE RIH
								C/O 30' SAND TAG 5TH PLUG @ 8666' DRL PLG IN 8 MIN 1000# PSI INCREASE RIH
								C/O 40' SAND TAG 6TH PLUG @ 9113' DRL PLG IN 4 MIN 800# PSI INCREASE RIH
								C/O 30' SAND TAG 7TH PLUG @ 9477' DRL PLG IN 5 MIN 600# PSI INCREASE. RIH
								C/O 90' SAND TAG 8TH PLUG @ 10,178' DRL PLG IN 5 MIN 700# PSI INCREASE RIH
								C/O 35' SAND TAG 9TH PLUG @ 10,474' DRL PLG IN 5 MIN 700# PSI INCREASE. RIH
								C/O TO @ 10.880' CIRC CLEAN, RACK OUT SWIVEL. L/D 22 JTS, LAND TBG ON 322 JTS 23/8 L-80. RD FLOOR, ND BOPS NU WH. PUMP OFF BIT, LET WELL SET FOR 30 MIN FOR BIT TO FALL. TURN WELL OVER TO FB CREW. RIG DWN MOVE OVER & RU ON NBU 920-12J, SDFWE.
								SICP = 2100 FTP = 100
								KB = 18'
								HANGER 41/16 = .83'
								322 JTS 23/8 L-80 = 10,173.66' (SURFAC VALVE OPEN) W/ POPOFF ASSEMBLY.
								1.875 X/N & POBS = 2.20'
								EOT @ 10,194.69'
								TWTR = 7095 BBLS
								TWR = 1500 BBLS
								TWLTR = 5595 BBLS
								352 JTS HAULED OUT
								322 LANDED
								30 TO RETURN
	14:30 - 13:00		PROD	50				WELL TURNED TO SALES @ 1430 HR ON 3/25/11-777 MCFD, 2160 BWPD, FTP 1950#, CP 2100#, CK 20/60"
3/28/2011	7:00 -			50				WELL IP'D ON 3/28/11 - 1998 MCFD, 0 BOPD, 622 BWPD, CP 2475#, FTP 2136#, CK 20/64", LP 128#, 24 HRS

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well Information

Well	NBU 920-12E	Wellbore No.	OH
Well Name	NBU 920-12E	Common Name	NBU 920-12E
Project	UTAH-UINTAH	Site	NBU 920-12E
Vertical Section Azimuth	152.57 (°)	North Reference	True
Origin N/S	0.0 (ft)	Origin E/W	0.0 (ft)
Spud Date	11/16/2009	UWI	SW/NW/0/9/S/20/E/12/0/0/26/PM/N/2,080.00/W/ 0/747.00/0/0
Active Datum	RKB @4,737.00ft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	PROPETRO INC. ONLY
Started	11/16/2009	Ended	11/19/2009
Tool Name	INC	Engineer	Anadarko

2.1.1 Tie On Point

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)
14.00	0.00	0.00	14.00	0.00	0.00

2.1.2 Survey Stations

Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Build (°/100ft)	Turn (°/100ft)	TFace (°)
11/16/2009	Tie On	14.00	0.00	0.00	14.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11/17/2009	NORMAL	1,834.00	0.25		1,833.99	3.97	0.00	-3.52	0.01	0.01	0.00	0.00
	NORMAL	2,714.00	0.75		2,713.96	11.65	0.00	-10.34	0.06	0.06	0.00	0.00

2.2 Survey Name: Survey #2

Survey Name	Survey #2	Company	SCIENTIFIC
Started	12/7/2010	Ended	
Tool Name	MWD	Engineer	JARED

2.2.1 Tie On Point

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)
2,714.00	0.75	0.00	2,713.96	11.65	0.00

2.2.2 Survey Stations

Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Build (°/100ft)	Turn (°/100ft)	TFace (°)
12/7/2010	Tie On	2,714.00	0.75	0.00	2,713.96	11.65	0.00	-10.34	0.00	0.00	0.00	0.00
12/8/2010	NORMAL	2,864.00	6.68	181.18	2,863.65	3.90	-0.18	-3.54	4.95	3.95	-119.21	-178.94
12/9/2010	NORMAL	3,368.00	1.41	171.95	3,366.22	-31.57	0.08	28.06	1.05	-1.05	-1.83	-177.55
	NORMAL	3,875.00	1.47	176.89	3,873.06	-44.24	1.31	39.88	0.03	0.01	0.97	66.69
	NORMAL	4,381.00	2.29	180.83	4,378.79	-60.83	1.52	54.69	0.16	0.16	0.78	10.93
	NORMAL	4,887.00	2.11	167.91	4,884.42	-80.05	3.32	72.58	0.10	-0.04	-2.55	-116.32
12/10/2010	NORMAL	5,390.00	1.06	172.04	5,387.22	-93.71	5.91	85.90	0.21	-0.21	0.82	175.85
	NORMAL	5,899.00	1.29	184.65	5,896.11	-104.09	6.09	95.19	0.07	0.05	2.48	54.77
12/11/2010	NORMAL	6,400.00	1.67	187.16	6,396.94	-116.95	4.73	105.98	0.08	0.08	0.50	10.94
	NORMAL	6,911.00	1.76	172.92	6,907.72	-132.13	4.76	119.47	0.09	0.02	-2.79	-85.25
12/12/2010	NORMAL	7,413.00	2.11	172.66	7,409.43	-148.94	6.90	135.38	0.07	0.07	-0.05	-1.57
12/13/2010	NORMAL	7,918.00	1.21	85.30	7,914.27	-157.73	13.40	146.17	0.47	-0.18	-17.30	-149.52
	NORMAL	8,046.00	1.14	101.29	8,042.25	-157.86	15.99	147.49	0.26	-0.05	12.49	109.97
12/14/2010	NORMAL	8,365.00	2.11	43.63	8,361.13	-154.24	23.16	147.57	0.56	0.30	-18.08	-90.35
	NORMAL	8,645.00	2.20	32.56	8,640.94	-145.97	29.61	143.21	0.15	0.03	-3.95	-83.37
12/15/2010	NORMAL	8,838.00	2.20	30.45	8,833.79	-139.66	33.48	139.38	0.04	0.00	-1.09	-91.05
12/16/2010	NORMAL	9,309.00	1.41	50.58	9,304.56	-128.19	42.54	133.37	0.21	-0.17	4.27	151.02
12/17/2010	NORMAL	10,225.00	0.55	85.41	10,220.43	-120.68	55.63	132.74	0.11	-0.09	3.80	161.85
12/19/2010	NORMAL	10,927.00	0.55	85.41	10,922.39	-120.14	62.34	135.35	0.00	0.00	0.00	0.00